



Express Mail Label No.: EV654295609US
Date of Deposit: March 28, 2002

#9
Attorney Docket No.: 21402-132 (CURA 432)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANTS: Spytek et al.
SERIAL NUMBER: 09/965,422 EXAMINER: Not Yet Assigned
FILING DATE: September 27, 2001 ART UNIT: 1645
FOR: NOVEL PROTEINS AND NUCLEIC ACIDS ENCODING SAME

BOX Missing Parts

Commissioner for Patents and Trademarks
Washington, D.C. 20231

**STATEMENT IN SUPPORT OF COMPUTER READABLE
FORM SUBMISSION UNDER 37 C.F.R. § 1.821(f)**

I hereby state that the content of the paper and computer readable forms of the Sequence Listing, submitted in the above-identified application in accordance with 37 C.F.R. § 1.821(c) and 1.821(e), respectively, are the same. No new matter is added.

Respectfully submitted,

Matthew Pavao

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Dated: March 28, 2002

TRA 1647407v1



SEQUENCE LISTING

<110> Spytek, Kimberly A
Casman, Stacie
Padigaru, Muralidhara
Dickson, Kevin
Vernet, Corine
Spaderna, Steven K
Shenoy, Suresh G
Gerlach, Valerie
Ellerman, Karen
Edinger, Shlomit
MacDougall, John R
Smithson, Glennda
Li, Li
Malyankar, Urial M
Taylor, Sarah
Gunther, Erik
Tchernev, Velizar T

<120> Novel Proteins and Nucleic Acids Encoding Same

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 Ile Ile Leu Val Ser Arg Leu Glu Pro Lys Pro His Met Pro Met Tyr
 65 70 75 80
 Phe Phe Leu Ser His Leu Ser Phe Leu Tyr Arg Cys Phe Thr Ser Ser
 85 90 95
 Val Ile Pro Gln Leu Leu Val Asn Leu Trp Glu Pro Met Lys Thr Ile
 100 105 110
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 145 150 155 160
 Cys Met Ala Leu Ala Ser Met Ala Trp Leu Ser Gly Ile Ala Thr Thr
 165 170 175
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 180 185 190
 Gln Val Asp His Phe Ile Cys Glu Val Pro Val Leu Ile Lys Leu Ala
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 Cys Val Gly Thr Thr Phe Asn Glu Ala Glu Leu Phe Val Ala Ser Ile
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Gln	Val	Asp	His	Phe	Ile	Cys	Glu	Val	Pro	Val	Leu	Ile	Lys	Leu	Ala
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 His Met Gly Met Val Arg His Thr Asn Glu Ser Asn Leu Ala Gly Phe
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 Val Leu Ile Leu Ile Leu Tyr Leu Leu Thr Ile Leu Gly Asn Thr Thr
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 Ile Ile Leu Val Ser Arg Leu Glu Pro Lys Leu His Met Pro Met Tyr
 65 70 75 80
 Phe Phe Leu Ser His Leu Ser Phe Leu Tyr Arg Cys Phe Thr Ser Ser
 85 90 95
 Val Ile Pro Gln Leu Leu Val Asn Leu Trp Glu Pro Met Lys Thr Ile
 100 105 110
 Ala Tyr Gly Gly Cys Leu Val His Leu Tyr Asn Ser His Ala Leu Gly
 115 120 125
 Ser Thr Glu Cys Val Leu Pro Ala Leu Met Ser Cys Asp Arg Tyr Val
 130 135 140

Ala Val Cys Arg Pro Leu His Tyr Thr Val Leu Met His Ile His Leu
 145 150 155 160
 Cys Met Ala Leu Ala Ser Met Ala Trp Leu Ser Gly Ile Ala Thr Thr
 165 170 175
 Leu Val Gln Ser Thr Leu Thr Leu Gln Leu Pro Phe Cys Gly His Arg
 180 185 190
 Gln Val Asp His Phe Ile Cys Glu Val Pro Val Leu Ile Lys Leu Ala
 195 200 205
 Cys Val Gly Thr Thr Phe Asn Glu Ala Glu Leu Phe Val Ala Ser Ile
 210 215 220
 Leu Phe Leu Ile Val Pro Val Ser Phe Ile Leu Val Ser Ser Gly Tyr
 225 230 235 240
 Ile Ala His Ala Val Leu Arg Ile Lys Ser Ala Thr Gly Arg Gln Lys
 245 250 255
 Ala Phe Gly Thr Cys Phe Ser His Leu Thr Val Val Thr Ile Phe Tyr
 260 265 270
 Gly Thr Ile Ile Phe Met Tyr Leu Gln Pro Ala Lys Ser Arg Ser Arg
 275 280 285
 Asp Gln Gly Lys Phe Val Ser Leu Phe Tyr Thr Val Val Thr Arg Met
 290 295 300
 Leu Asn Pro Leu Ile Tyr Thr Leu Arg Ile Lys Glu Val Lys Gly Ala
 305 310 315 320
 Leu Lys Lys Val Leu Ala Lys Ala Leu Gly Val Asn Ile Leu
 325 330

<210> 11
 <211> 1005
 <212> DNA
 <213> Homo sapiens

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 ttcaccataa tcatcatctc atatctggat cccctcttc ataccccaat gtactttttt 240
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 gttaacttgc aaagaccaa gaagacgatc acttacggtg gttgtgtggc gcaactctat 360
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 tacattgctg tctgcaaacc cctccactat gtagtcatca tgaaccacg gctttgccaa 480
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 caagctgtgc tgaggatcaa atcagtagag gcaaggcata aagccttcag cacctgctcc 780

tcccacctta cagtggatg tatattctat ggcaccataa tctacgtgta cctgcaacct 840
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 cccacttttaa atcctatcat ctatacttta aggaacaagg atatgaaaga ggctctgagg 960
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<210> 12
 <211> 309
 <212> PRT
 <213> Homo sapiens

<400> 12

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Phe	Ser	Asp	His	Pro	Arg	Leu	Glu	Ala	Val	Leu	Phe	Val	Phe	Val	Leu
			20					25					30		
Phe	Phe	Tyr	Leu	Leu	Thr	Leu	Val	Gly	Asn	Phe	Thr	Ile	Ile	Ile	Ile
		35					40					45			
Ser	Tyr	Leu	Asp	Pro	Pro	Leu	His	Thr	Pro	Met	Tyr	Phe	Phe	Leu	Ser
	50					55				60					
Asn	Leu	Ser	Leu	Leu	Asp	Ile	Cys	Phe	Thr	Thr	Ser	Leu	Ala	Pro	Gln
65					70					75				80	
Thr	Leu	Val	Asn	Leu	Gln	Arg	Pro	Lys	Lys	Thr	Ile	Thr	Tyr	Gly	Gly
			85						90					95	
Cys	Val	Ala	Gln	Leu	Tyr	Ile	Ser	Leu	Ala	Leu	Gly	Ser	Thr	Glu	Cys
			100					105					110		
Ile	Leu	Leu	Ala	Asp	Met	Ala	Leu	Asp	Arg	Tyr	Ile	Ala	Val	Cys	Lys
		115					120					125			
Pro	Leu	His	Tyr	Val	Val	Ile	Met	Asn	Pro	Arg	Leu	Cys	Gln	Gln	Leu
	130					135					140				
Ala	Ser	Ile	Ser	Trp	Leu	Ser	Gly	Leu	Ala	Ser	Ser	Leu	Ile	His	Ala
145					150					155				160	
Thr	Phe	Thr	Leu	Gln	Leu	Pro	Leu	Cys	Gly	Asn	His	Arg	Leu	Asp	His
			165						170					175	
Phe	Ile	Cys	Glu	Val	Pro	Ala	Leu	Leu	Lys	Leu	Ala	Cys	Val	Asp	Thr
		180						185					190		
Thr	Val	Asn	Glu	Leu	Val	Leu	Phe	Val	Val	Ser	Val	Leu	Phe	Val	Val
		195					200					205			
Ile	Pro	Pro	Ala	Leu	Ile	Ser	Ile	Ser	Tyr	Gly	Phe	Ile	Thr	Gln	Ala
	210					215					220				
Val	Leu	Arg	Ile	Lys	Ser	Val	Glu	Ala	Arg	His	Lys	Ala	Phe	Ser	Thr
225					230					235				240	

Cys Ser Ser His Leu Thr Val Val Ile Ile Phe Tyr Gly Thr Ile Ile
 245 250 255
 Tyr Val Tyr Leu Gln Pro Ser Asp Ser Tyr Ala Gln Asp Gln Gly Lys
 260 265 270
 Phe Ile Ser Leu Phe Tyr Thr Met Val Thr Pro Thr Leu Asn Pro Ile
 275 280 285
 Ile Tyr Thr Leu Arg Asn Lys Asp Met Lys Glu Ala Leu Arg Lys Leu
 290 295 300
 Leu Ser Gly Lys Leu
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<210> 13
 <211> 954
 <212> DNA
 <213> Homo sapiens

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 agcaacgtgg tcaagatcat tctcatccac atagactccc gcctccacac ccccatgtac 180
 ttctgtctca gccagctctc cctcagggac atcctgtata ttccaccat tgtgccc aaa 240
 atgctggctg accaggtgat gagccagaga gccatttctt ttgctggatg cactgccc aa 300
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 gatcgctacg tagccatctg caacctctc cactatcctg tctcatgag ccgcaagatc 420
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 cccgtcacca tgcagttccc cttctgtgcc tctcgggaga tcaaccactt cttctgcgag 540
 gtgcctgccc ttctgaagct ctctgcacg gacacatcag cctacgagac agccatgtat 600
 gtctgtctgta ttatgatgct cctcatccct ttctctgtca tctcgggctc ttacacaaga 660
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 cttactccca tgctcaatcc actcatttac agccttagga acaaggatgt cacagggggc 900
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<210> 14
 <211> 317
 <212> PRT
 <213> Homo sapiens

<400> 14
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 20 25 30
 Leu Val Phe Leu Thr Ser Ile Ala Ser Asn Val Val Lys Ile Ile Leu
 35 40 45
 Ile His Ile Asp Ser Arg Leu His Thr Pro Met Tyr Phe Leu Leu Ser
 50 55 60

Gln	Leu	Ser	Leu	Arg	Asp	Ile	Leu	Tyr	Ile	Ser	Thr	Ile	Val	Pro	Lys	65	70	75	80
Met	Leu	Val	Asp	Gln	Val	Met	Ser	Gln	Arg	Ala	Ile	Ser	Phe	Ala	Gly	85	90	95	
Cys	Thr	Ala	Gln	His	Phe	Leu	Tyr	Leu	Thr	Leu	Ala	Gly	Ala	Glu	Phe	100	105	110	
Phe	Leu	Leu	Gly	Leu	Met	Ser	Tyr	Asp	Arg	Tyr	Val	Ala	Ile	Cys	Asn	115	120	125	
Pro	Leu	His	Tyr	Pro	Val	Leu	Met	Ser	Arg	Lys	Ile	Cys	Trp	Leu	Ile	130	135	140	
Val	Ala	Ala	Ala	Trp	Leu	Gly	Gly	Ser	Ile	Asp	Gly	Phe	Leu	Leu	Thr	145	150	155	160
Pro	Val	Thr	Met	Gln	Phe	Pro	Phe	Cys	Ala	Ser	Arg	Glu	Ile	Asn	His	165	170	175	
Phe	Phe	Cys	Glu	Val	Pro	Ala	Leu	Leu	Lys	Leu	Ser	Cys	Thr	Asp	Thr	180	185	190	
Ser	Ala	Tyr	Glu	Thr	Ala	Met	Tyr	Val	Cys	Cys	Ile	Met	Met	Leu	Leu	195	200	205	
Ile	Pro	Phe	Ser	Val	Ile	Ser	Gly	Ser	Tyr	Thr	Arg	Ile	Leu	Ile	Thr	210	215	220	
Val	Tyr	Arg	Met	Ser	Glu	Ala	Glu	Gly	Arg	Gly	Lys	Ala	Val	Ala	Thr	225	230	235	240
Cys	Ser	Ser	His	Met	Val	Val	Val	Ser	Leu	Phe	Tyr	Gly	Ala	Ala	Met	245	250	255	
Tyr	Thr	Tyr	Val	Leu	Pro	His	Ser	Tyr	His	Thr	Pro	Glu	Gln	Asp	Lys	260	265	270	
Ala	Val	Ser	Ala	Phe	Tyr	Thr	Ile	Leu	Thr	Pro	Met	Leu	Asn	Pro	Leu	275	280	285	
Ile	Tyr	Ser	Leu	Arg	Asn	Lys	Asp	Val	Thr	Gly	Ala	Leu	Gln	Lys	Val	290	295	300	
Val	Gly	Arg	Cys	Val	Ser	Ser	Gly	Lys	Val	Thr	Thr	Phe	305	310	315				

<210> 15

<211> 954

<212> DNA

<213> Homo sapiens

<400> 15

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ttctgtctca gccagctctc cctcagggac atcctgtata ttccaccat tgtgccccaa 240
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<210> 16
 <211> 317
 <212> PRT
 <213> Homo sapiens

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<400> 16
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Leu Phe Ser Asn Ala Arg Phe Pro Trp Leu Leu Phe Ala Leu Ile Leu
      20                      25                      30

Leu Val Phe Val Thr Ser Ile Ala Ser Asn Val Val Met Ile Ile Leu
      35                      40                      45

Ile His Ile Asp Ser Arg Leu His Thr Pro Met Tyr Phe Leu Leu Ser
      50                      55                      60

Gln Leu Ser Leu Arg Asp Ile Leu Tyr Ile Ser Thr Ile Val Pro Lys
      65                      70                      75                      80

Met Leu Val Asp Gln Val Met Ser Gln Arg Ala Ile Ser Phe Ala Gly
      85                      90                      95

Cys Thr Ala Gln His Phe Leu Tyr Leu Thr Leu Ala Gly Ala Glu Phe
      100                     105                     110

Phe Leu Leu Gly Leu Met Ser Tyr Asp Arg Tyr Val Ala Ile Cys Asn
      115                     120                     125

Pro Leu His Tyr Pro Asp Leu Met Ser Arg Lys Ile Cys Trp Leu Ile
      130                     135                     140

Val Ala Ala Ala Trp Leu Gly Gly Ser Ile Asp Gly Phe Leu Leu Thr
      145                     150                     155                     160

Pro Val Thr Met Gln Phe Pro Phe Cys Ala Ser Arg Glu Ile Asn His
      165                     170                     175

Phe Phe Cys Glu Val Pro Ala Leu Leu Lys Leu Ser Cys Thr Asp Thr

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180	185	190
Ser Ala Tyr Glu Thr Ala Met Tyr Val Cys Cys Ile Met Met Leu Leu		
195	200	205
Ile Pro Phe Ser Val Ile Ser Gly Ser Tyr Thr Arg Ile Leu Ile Thr		
210	215	220
Val Tyr Arg Met Ser Glu Ala Glu Gly Arg Arg Lys Ala Val Ala Thr		
225	230	235
Cys Ser Ser His Met Val Val Val Ser Leu Phe Tyr Gly Ala Ala Met		
245	250	255
Tyr Thr Tyr Val Leu Pro His Ser Tyr His Thr Pro Glu Gln Asp Lys		
260	265	270
Ala Val Ser Ala Phe Tyr Thr Ile Leu Thr Pro Met Leu Asn Pro Leu		
275	280	285
Ile Tyr Ser Leu Arg Asn Lys Asp Val Thr Gly Ala Leu Gln Lys Val		
290	295	300
Val Gly Arg Cys Val Ser Ser Gly Lys Val Thr Thr Phe		
305	310	315

<210> 17
 <211> 939
 <212> DNA
 <213> Homo sapiens

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 atctcacacc ctggccgcct ctgcttgctt atcttcagta tatttttgat ggctgtgtct 120
 tggaatatta cattgatact tctgatccac attgactcct ctctgcatac tcccatgtac 180
 ttctttataa accagctctc actcatagac ttgacatata tttctgtcac tgtcccaaaa 240
 atgctggtga accagctggc caaagacaag accatctcgg tccttgggtg tggcaccag 300
 atgtacttct acctgcagtt gggaggtgca gagtgtgcc ttctagccgc catggcctat 360
 gaccgctatg tggtatctg ccatacctctc cgttactctg tgctcatgag ccatagggta 420
 tgtctcctcc tggcatcagg ctgctggttt gtgggctcag tggatggctt catgtcact 480
 cccatgcaca tgagcttccc cttctgcaga tcccatgaga ttcagcactt cttctgtgag 540
 gtccctgctg ttttgaagct ctcttgctca gacacctcac ttacaagat tttcatgtac 600
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 ttgaaaaaaa tgctgagcgt gcagaaacct ccatattaa 939

<210> 18
 <211> 312
 <212> PRT
 <213> Homo sapiens

<400> 18

Met	Arg	Leu	Ala	Asn	Gln	Thr	Leu	Gly	Gly	Asp	Phe	Phe	Leu	Leu	Gly	1	5	10	15
Ile	Phe	Ser	Gln	Ile	Ser	His	Pro	Gly	Arg	Leu	Cys	Leu	Leu	Ile	Phe	20	25	30	
Ser	Ile	Phe	Leu	Met	Ala	Val	Ser	Trp	Asn	Ile	Thr	Leu	Ile	Leu	Leu	35	40	45	
Ile	His	Ile	Asp	Ser	Ser	Leu	His	Thr	Pro	Met	Tyr	Phe	Phe	Ile	Asn	50	55	60	
Gln	Leu	Ser	Leu	Ile	Asp	Leu	Thr	Tyr	Ile	Ser	Val	Thr	Val	Pro	Lys	65	70	75	80
Met	Leu	Val	Asn	Gln	Leu	Ala	Lys	Asp	Lys	Thr	Ile	Ser	Val	Leu	Gly	85	90	95	
Cys	Gly	Thr	Gln	Met	Tyr	Phe	Tyr	Leu	Gln	Leu	Gly	Gly	Ala	Glu	Cys	100	105	110	
Cys	Leu	Leu	Ala	Ala	Met	Ala	Tyr	Asp	Arg	Tyr	Val	Ala	Ile	Cys	His	115	120	125	
Pro	Leu	Arg	Tyr	Ser	Val	Leu	Met	Ser	His	Arg	Val	Cys	Leu	Leu	Leu	130	135	140	
Ala	Ser	Gly	Cys	Trp	Phe	Val	Gly	Ser	Val	Asp	Gly	Phe	Met	Leu	Thr	145	150	155	160
Pro	Ile	Ala	Met	Ser	Phe	Pro	Phe	Cys	Arg	Ser	His	Glu	Ile	Gln	His	165	170	175	
Phe	Phe	Cys	Glu	Val	Pro	Ala	Val	Leu	Lys	Leu	Ser	Cys	Ser	Asp	Thr	180	185	190	
Ser	Leu	Tyr	Lys	Ile	Phe	Met	Tyr	Leu	Cys	Cys	Val	Ile	Met	Leu	Leu	195	200	205	
Ile	Pro	Val	Thr	Val	Ile	Ser	Val	Ser	Tyr	Tyr	Tyr	Ile	Ile	Leu	Thr	210	215	220	
Ile	His	Lys	Met	Asn	Ser	Val	Glu	Gly	Arg	Lys	Lys	Ala	Phe	Thr	Thr	225	230	235	240
Cys	Ser	Ser	His	Ile	Thr	Val	Val	Ser	Leu	Phe	Tyr	Gly	Ala	Ala	Ile	245	250	255	
Tyr	Asn	Tyr	Met	Leu	Pro	Ser	Ser	Tyr	Gln	Thr	Pro	Glu	Lys	Asp	Met	260	265	270	
Met	Ser	Ser	Phe	Phe	Tyr	Thr	Ile	Leu	Thr	Pro	Val	Leu	Asn	Pro	Ile	275	280	285	
Ile	Tyr	Ser	Phe	Arg	Asn	Lys	Asp	Val	Thr	Arg	Ala	Leu	Lys	Lys	Met	290	295	300	

Leu Ser Val Gln Lys Pro Pro Tyr
305 310

<210> 19
<211> 948
<212> DNA
<213> Homo sapiens

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aaggcgttgt ctggaaatgc tgtcctgata cttctgatac actgtgacgc ccacctccac 180
agccccatgt actttttcat cagtcaattg tctctcatgg acatggcgta catttctgtc 240
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aaccataggg tctgtctttt cctggcatcg ggctgctggg tcttgggctc agtggatggc 480
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accctcatgt acctatgctg tgcctcatg ctctcatcc ctgtgacgat catttcaagc 660
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<210> 20
<211> 315
<212> PRT
<213> Homo sapiens

<400> 20
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Ile Leu Met Gly Leu Phe Arg Gln Ser Lys His Pro Ala Leu Leu Ser
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Val Val Ile Phe Val Val Phe Leu Lys Ala Leu Ser Gly Asn Ala Val
35 40 45
Leu Ile Leu Leu Ile His Cys Asp Ala His Leu His Ser Pro Met Tyr
50 55 60
Phe Phe Ile Ser Gln Leu Ser Leu Met Asp Met Ala Tyr Ile Ser Val
65 70 75 80
Thr Val Pro Lys Met Leu Leu Asp Gln Val Met Gly Val Asn Lys Val
85 90 95
Ser Ala Pro Glu Cys Gly Met Gln Met Phe Leu Tyr Leu Thr Leu Ala
100 105 110
Gly Ser Glu Phe Phe Leu Leu Ala Thr Met Ala Tyr Asp Arg Tyr Val
115 120 125

Ala	Ile	Cys	His	Pro	Leu	Arg	Tyr	Pro	Val	Leu	Met	Asn	His	Arg	Val
130						135					140				
Cys	Leu	Phe	Leu	Ala	Ser	Gly	Cys	Trp	Phe	Leu	Gly	Ser	Val	Asp	Gly
145					150					155				160	
Phe	Met	Leu	Thr	Pro	Ile	Thr	Met	Ser	Phe	Pro	Phe	Cys	Arg	Ser	Trp
				165					170					175	
Glu	Ile	His	His	Phe	Phe	Cys	Glu	Val	Pro	Ala	Val	Thr	Ile	Leu	Ser
		180						185					190		
Cys	Ser	Asp	Thr	Ser	Leu	Tyr	Glu	Thr	Leu	Met	Tyr	Leu	Cys	Cys	Val
		195					200					205			
Leu	Met	Leu	Leu	Ile	Pro	Val	Thr	Ile	Ile	Ser	Ser	Ser	Tyr	Leu	Leu
210						215					220				
Ile	Leu	Leu	Thr	Val	His	Arg	Met	Asn	Ser	Ala	Glu	Gly	Arg	Lys	Lys
225					230					235				240	
Ala	Phe	Ala	Thr	Cys	Ser	Ser	His	Leu	Thr	Val	Val	Ile	Leu	Phe	Tyr
				245					250					255	
Gly	Ala	Ala	Val	Tyr	Thr	Tyr	Met	Leu	Pro	Ser	Ser	Tyr	His	Thr	Pro
			260					265					270		
Glu	Lys	Asp	Met	Met	Val	Ser	Val	Phe	Tyr	Thr	Ile	Leu	Thr	Pro	Val
		275					280					285			
Leu	Asn	Pro	Leu	Ile	Tyr	Ser	Leu	Arg	Asn	Lys	Asp	Val	Met	Gly	Ala
290						295					300				
Leu	Lys	Lys	Met	Leu	Thr	Val	Arg	Phe	Val	Leu					
305					310					315					

<210> 21
 <211> 949
 <212> DNA
 <213> Homo sapiens

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 aaggcggtgt ctgaaaatgc tgtcctgata cttctgatac actgtgacgc ccacctccac 180
 acccccatgt actttttcat cagtcaattg tctctcatgg acatggcgta catttctgtc 240
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 tgtgggatgc agatgttcct ctatctgaca ctacgaggtt cggaattttt ctttctagcc 360
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 aaccataggg tctgtctttt cctggcatcg ggctgctggg tcctgggctc agtggatggc 480
 ttcattgctca ctcccatcac catgagcttc ccttctgca gatcctggga gattcatcat 540
 ttcttctgtg aagtccttgc tgtaacgata ctgtcctgct cagacacctc actctataag 600
 accctcatgt acctatgctg tgtcctcatg ctctcatcc ctgtgacgat catttcaagc 660
 tcctatttac tcctcctcct caccatccac aggatgaact cagcagaggg ccggaaaaag 720
 gccttttgcca cctgctcctc ccacctgact gtggtcatcc tcttctatgg ggctgccgtc 780

tacacctaca tgctccccag ctctaccac acccctgaga aggacatgat ggtatctgtc 840
 ttctatacca tcctcaactcc ggtgctgaac cctttaatct atagtcttag gaataaggat 900
 gtcattggggg ctctgaagaa aatgttaact gtgagattcg tcctttagg 949

<210> 22
 <211> 315
 <212> PRT
 <213> Homo sapiens

<400> 22

Met Ala Asn Ile Thr Arg Met Ala Asn His Thr Gly Arg Leu Asp Phe
 1 5 10 15

Ile Leu Met Gly Leu Phe Arg Gln Ser Lys His Pro Ala Leu Leu Ser
 20 25 30

Val Val Ile Phe Val Val Phe Leu Lys Ala Leu Ser Glu Asn Ala Val
 35 40 45

Leu Ile Leu Leu Ile His Cys Asp Ala His Leu His Thr Pro Met Tyr
 50 55 60

Phe Phe Ile Ser Gln Leu Ser Leu Met Asp Met Ala Tyr Ile Ser Val
 65 70 75 80

Thr Val Pro Lys Met Leu Leu Asp Gln Val Met Gly Val Asn Lys Ile
 85 90 95

Ser Ala Pro Glu Cys Gly Met Gln Met Phe Leu Tyr Leu Thr Leu Ala
 100 105 110

Gly Ser Glu Phe Phe Leu Leu Ala Thr Met Ala Tyr Asp Arg Tyr Val
 115 120 125

Ala Ile Cys His Pro Leu Arg Tyr Pro Val Leu Met Asn His Arg Val
 130 135 140

Cys Leu Phe Leu Ala Ser Gly Cys Trp Phe Leu Gly Ser Val Asp Gly
 145 150 155 160

Phe Met Leu Thr Pro Ile Thr Met Ser Phe Pro Phe Cys Arg Ser Trp
 165 170 175

Glu Ile His His Phe Phe Cys Glu Val Pro Ala Val Thr Ile Leu Ser
 180 185 190

Cys Ser Asp Thr Ser Leu Tyr Lys Thr Leu Met Tyr Leu Cys Cys Val
 195 200 205

Leu Met Leu Leu Ile Pro Val Thr Ile Ile Ser Ser Ser Tyr Leu Leu
 210 215 220

Ile Leu Leu Thr Ile His Arg Met Asn Ser Ala Glu Gly Arg Lys Lys
 225 230 235 240

Ala Phe Ala Thr Cys Ser Ser His Leu Thr Val Val Ile Leu Phe Tyr

245 250 255

Gly Ala Ala Val Tyr Thr Tyr Met Leu Pro Ser Ser Tyr His Thr Pro
260 265 270

Glu Lys Asp Met Met Val Ser Val Phe Tyr Thr Ile Leu Thr Pro Val
275 280 285

Leu Asn Pro Leu Ile Tyr Ser Leu Arg Asn Lys Asp Val Met Gly Ala
290 295 300

Leu Lys Lys Met Leu Thr Val Arg Phe Val Leu
305 310 315

<210> 23
<211> 948
<212> DNA
<213> Homo sapiens

<400> 23

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aaggcggtgt	ctggaaatgc	tgctcctgatc	cttctgatac	actgtgacgc	ccacctccac	180
agcccatgt	actttttcat	cagtcaattg	tctctcatgg	acatggcgta	catttctgtc	240
actgtgcca	agatgctcct	ggaccaggtc	atgggtgtga	ataaggctctc	agccctgag	300
tgtgggatgc	agatgttcct	ctatctgaca	ctagcagggt	cgggaattttt	ccttctagcc	360
accatggcct	atgaccgcta	cgtggccatc	tgccatcctc	tccgttaccc	tgctctcatg	420
aaccataggg	tctgtctttt	cctggcatcg	ggctgctggt	tcttgggctc	agtggatggc	480
ttcatgctca	ctcccatcac	catgagcttc	cccttctgca	gacccctggga	gattcatcat	540
ttcttctgtg	aagtccctgc	tgtaacgata	ctgtcctgct	cagacacctc	actctatgag	600
accctcatgt	acctatgctg	tgctcctcatg	ctcctcatcc	ctgtgacgat	catttcaagc	660
tcctatttac	tcactcctct	caccgtccac	aggatgaact	cagcagaggg	ccggaaaaag	720
gcctttgcca	cctgtcctc	ccacctgact	gtgggtcatcc	tcttctatgg	ggctgccgtc	780
tacacctaca	tgctccccag	ctcctaccac	acccttgaga	aggacatgat	ggtatctgtc	840
ttctatacca	tcctcactcc	ggtgctgaac	cctttaatct	atagtcttag	gaataaggat	900
gtcatggggg	ctctgaagaa	aatgttaact	gtgagattcg	tccttttag		948

<210> 24
<211> 315
<212> PRT
<213> Homo sapiens

<400> 24

Met	Ala	Asn	Ile	Thr	Arg	Met	Ala	Asn	His	Thr	Gly	Arg	Leu	Asp	Phe
1				5					10					15	
Ile	Leu	Met	Gly	Leu	Phe	Arg	Arg	Ser	Lys	His	Pro	Ala	Leu	Leu	Ser
		20						25					30		
Val	Val	Ile	Phe	Val	Val	Phe	Leu	Lys	Ala	Leu	Ser	Gly	Asn	Ala	Val
		35					40					45			
Leu	Ile	Leu	Leu	Ile	His	Cys	Asp	Ala	His	Leu	His	Ser	Pro	Met	Tyr
	50					55					60				

Phe Phe Ile Ser Gln Leu Ser Leu Met Asp Met Ala Tyr Ile Ser Val
 65 70 75 80
 Thr Val Pro Lys Met Leu Leu Asp Gln Val Met Gly Val Asn Lys Val
 85 90 95
 Ser Ala Pro Glu Cys Gly Met Gln Met Phe Leu Tyr Leu Thr Leu Ala
 100 105 110
 Gly Ser Glu Phe Phe Leu Leu Ala Thr Met Ala Tyr Asp Arg Tyr Val
 115 120 125
 Ala Ile Cys His Pro Leu Arg Tyr Pro Val Leu Met Asn His Arg Val
 130 135 140
 Cys Leu Phe Leu Ala Ser Gly Cys Trp Phe Leu Gly Ser Val Asp Gly
 145 150 155 160
 Phe Met Leu Thr Pro Ile Thr Met Ser Phe Pro Phe Cys Arg Ser Trp
 165 170 175
 Glu Ile His His Phe Phe Cys Glu Val Pro Ala Val Thr Ile Leu Ser
 180 185 190
 Cys Ser Asp Thr Ser Leu Tyr Glu Thr Leu Met Tyr Leu Cys Cys Val
 195 200 205
 Leu Met Leu Leu Ile Pro Val Thr Ile Ile Ser Ser Ser Tyr Leu Leu
 210 215 220
 Ile Leu Leu Thr Val His Arg Met Asn Ser Ala Glu Gly Arg Lys Lys
 225 230 235 240
 Ala Phe Ala Thr Cys Ser Ser His Leu Thr Val Val Ile Leu Phe Tyr
 245 250 255
 Gly Ala Ala Val Tyr Thr Tyr Met Leu Pro Ser Ser Tyr His Thr Pro
 260 265 270
 Glu Lys Asp Met Met Val Ser Val Phe Tyr Thr Ile Leu Thr Pro Val
 275 280 285
 Leu Asn Pro Leu Ile Tyr Ser Leu Arg Asn Lys Asp Val Met Gly Ala
 290 295 300
 Leu Lys Lys Met Leu Thr Val Arg Phe Val Leu
 305 310 315

<210> 25

<211> 951

<212> DNA

<213> Homo sapiens

<400> 25

atgacgaaca catcaccctc tgacttcacc ctctggggc ttctggtgaa cagtgaggct 60
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gtcatgatat tcttgattca ggtggactct cgcctccaca ccccatgta ctttctgctc 180
agtcagctgt ccatcatgga cacccttttc atctgtacca ctgtcccaa actcctggca 240
gacatggttt ctaaagagaa gatcatttcc tttgtggcct gtggcatcca gatcttcctc 300
tacctgacca tgattggttc tgagttcttc ctctgggccc tcatggccta tgactgctac 360
gtggctgtct gtaaccctct gagataccca gtctgatga accgcaagaa gtgtcttttg 420
ctggctgctg gtgcctgggt tgggggctcc ctcgatggct ttctgctcac tcccatcacc 480
atgaatgtcc cttactgtgg ctcccgaagt atcaaccatt ttttctgtga gatcccagca 540
gttctgaaac tggcctgtgc agacacgtcc ttgtatgaaa ctctgatgta catctgctgt 600
gtcctcatgt tgctcatccc catctctatc atctccactt cctactccct catcttgcta 660
accatccacc gcatgccttc tgctgaaggc cgcaaaaagg ccttcaccac ttgttcctcc 720
cacttgactg tagttagcat cttctatggg gctgccttct acacatacgt gctgccccag 780
tccttccaca ccccgagca ggacaaagta gtgtcagcct tctataccat tgtcacgccc 840
atgcttaatc ctctcatcta cagcctcaga aacaaggacg tcataggggc atttaaaaag 900
gtatttgcac gttgtcctac tgctcagaaa gtagcaacaa gtgatgctta g 951

```

<210> 26

<211> 316

<212> PRT

<213> Homo sapiens

<400> 26

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Met Thr Asn Thr Ser Ser Ser Asp Phe Thr Leu Leu Gly Leu Leu Val
  1                      5                      10                      15

```

```

Asn Ser Glu Ala Ala Gly Ile Val Phe Thr Val Ile Leu Ala Val Phe
          20                      25                      30

```

```

Leu Gly Ala Val Thr Ala Asn Leu Val Met Ile Phe Leu Ile Gln Val
    35                      40                      45

```

```

Asp Ser Arg Leu His Thr Pro Met Tyr Phe Leu Leu Ser Gln Leu Ser
    50                      55                      60

```

```

Ile Met Asp Thr Leu Phe Ile Cys Thr Thr Val Pro Lys Leu Leu Ala
    65                      70                      75                      80

```

```

Asp Met Val Ser Lys Glu Lys Ile Ile Ser Phe Val Ala Cys Gly Ile
          85                      90                      95

```

```

Gln Ile Phe Leu Tyr Leu Thr Met Ile Gly Ser Glu Phe Phe Leu Leu
    100                      105                      110

```

```

Gly Leu Met Ala Tyr Asp Cys Tyr Val Ala Val Cys Asn Pro Leu Arg
    115                      120                      125

```

```

Tyr Pro Val Leu Met Asn Arg Lys Lys Cys Leu Leu Leu Ala Ala Gly
    130                      135                      140

```

```

Ala Trp Phe Gly Gly Ser Leu Asp Gly Phe Leu Leu Thr Pro Ile Thr
    145                      150                      155                      160

```

```

Met Asn Val Pro Tyr Cys Gly Ser Arg Ser Ile Asn His Phe Phe Cys
          165                      170                      175

```

```

Glu Ile Pro Ala Val Leu Lys Leu Ala Cys Ala Asp Thr Ser Leu Tyr
          180                      185                      190

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Glu Thr Leu Met Tyr Ile Cys Cys Val Leu Met Leu Leu Ile Pro Ile
 195 200 205
 Ser Ile Ile Ser Thr Ser Tyr Ser Leu Ile Leu Leu Thr Ile His Arg
 210 215 220
 Met Pro Ser Ala Glu Gly Arg Lys Lys Ala Phe Thr Thr Cys Ser Ser
 225 230 235 240
 His Leu Thr Val Val Ser Ile Phe Tyr Gly Ala Ala Phe Tyr Thr Tyr
 245 250 255
 Val Leu Pro Gln Ser Phe His Thr Pro Glu Gln Asp Lys Val Val Ser
 260 265 270
 Ala Phe Tyr Thr Ile Val Thr Pro Met Leu Asn Pro Leu Ile Tyr Ser
 275 280 285
 Leu Arg Asn Lys Asp Val Ile Gly Ala Phe Lys Lys Val Phe Ala Cys
 290 295 300
 Cys Ser Ser Ala Gln Lys Val Ala Thr Ser Asp Ala
 305 310 315

<210> 27
 <211> 993
 <212> DNA
 <213> Homo sapiens

<400> 27
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 gccgggattg tatttacagt gatccttgct gttttcttgg gggccgtgac tgcaaatttg 120
 gtcacgatgat tcttgattca ggtggactct cgccctccaca ccccatgta ctttctgctc 180
 agtcagctgt ccatcatgga cacccttttc atctgtacca ctgtcccaa actcctggca 240
 gacatgggtt cttaaagagaa gatcatttcc tttgtggcct gtggcatcca gatcttcctc 300
 tacctgacca tgattgggtc tgagttcttc ctccctgggcc tcatggccta tgaccgctac 360
 gtggctgtct gtaaccctct gagataccca gtccctgatga accgcaagaa gtgtcttttg 420
 ctggctgctg gtgcctggtt tgggggctcc ctcgatggtt ttctgctcac tcccatcacc 480
 atgaatgtcc cttactgtgg ctcccgaagt atcaaccatt ttttctgtga gatcccagca 540
 gttctgaaac tggcctgtgc agacacgtcc ttgtatgaaa ctctgatgta catctgctgt 600
 gtccctcatgt tgctcatccc catctctatc atctccactt cctactcct catcttgta 660
 accatccacc gcatgcctc tgetgaaggt cgaaaaaagg ccttcaccac ttgttccctc 720
 cacttgactg tagttagcat cttctatggg gctgccttct acacatacgt gctgccccag 780
 tccctccaca ccccgagca ggacaaagta gtgtcagcct tctataccat tgtcacgccc 840
 atgcttaatc ctctcatcta cagcctcaga aacaaggacg tcataggggc atttaaaaag 900
 gtatttgcat gttgtctatc tgetcggaaa gtagcaacaa gtgatgctta gagagtcat 960
 gccagagga taaggcttcc taaggacttc ctc 993

<210> 28
 <211> 316
 <212> PRT
 <213> Homo sapiens

<400> 28

Met	Thr	Asn	Thr	Ser	Ser	Ser	Asp	Phe	Thr	Leu	Leu	Gly	Leu	Leu	Val	1	5	10	15
Asn	Ser	Glu	Ala	Ala	Gly	Ile	Val	Phe	Thr	Val	Ile	Leu	Ala	Val	Phe	20	25	30	
Leu	Gly	Ala	Val	Thr	Ala	Asn	Leu	Val	Met	Ile	Phe	Leu	Ile	Gln	Val	35	40	45	
Asp	Ser	Arg	Leu	His	Thr	Pro	Met	Tyr	Phe	Leu	Leu	Ser	Gln	Leu	Ser	50	55	60	
Ile	Met	Asp	Thr	Leu	Phe	Ile	Cys	Thr	Thr	Val	Pro	Lys	Leu	Leu	Ala	65	70	75	80
Asp	Met	Val	Ser	Lys	Glu	Lys	Ile	Ile	Ser	Phe	Val	Ala	Cys	Gly	Ile	85	90	95	
Gln	Ile	Phe	Leu	Tyr	Leu	Thr	Met	Ile	Gly	Ser	Glu	Phe	Phe	Leu	Leu	100	105	110	
Gly	Leu	Met	Ala	Tyr	Asp	Arg	Tyr	Val	Ala	Val	Cys	Asn	Pro	Leu	Arg	115	120	125	
Tyr	Pro	Val	Leu	Met	Asn	Arg	Lys	Lys	Cys	Leu	Leu	Leu	Ala	Ala	Gly	130	135	140	
Ala	Trp	Phe	Gly	Gly	Ser	Leu	Asp	Gly	Phe	Leu	Leu	Thr	Pro	Ile	Thr	145	150	155	160
Met	Asn	Val	Pro	Tyr	Cys	Gly	Ser	Arg	Ser	Ile	Asn	His	Phe	Phe	Cys	165	170	175	
Glu	Ile	Pro	Ala	Val	Leu	Lys	Leu	Ala	Cys	Ala	Asp	Thr	Ser	Leu	Tyr	180	185	190	
Glu	Thr	Leu	Met	Tyr	Ile	Cys	Cys	Val	Leu	Met	Leu	Leu	Ile	Pro	Ile	195	200	205	
Ser	Ile	Ile	Ser	Thr	Ser	Tyr	Ser	Leu	Ile	Leu	Leu	Thr	Ile	His	Arg	210	215	220	
Met	Pro	Ser	Ala	Glu	Gly	Arg	Lys	Lys	Ala	Phe	Thr	Thr	Cys	Ser	Ser	225	230	235	240
His	Leu	Thr	Val	Val	Ser	Ile	Phe	Tyr	Gly	Ala	Ala	Phe	Tyr	Thr	Tyr	245	250	255	
Val	Leu	Pro	Gln	Ser	Phe	His	Thr	Pro	Glu	Gln	Asp	Lys	Val	Val	Ser	260	265	270	
Ala	Phe	Tyr	Thr	Ile	Val	Thr	Pro	Met	Leu	Asn	Pro	Leu	Ile	Tyr	Ser	275	280	285	
Leu	Arg	Asn	Lys	Asp	Val	Ile	Gly	Ala	Phe	Lys	Lys	Val	Phe	Ala	Cys	290	295	300	

Cys Ser Ser Ala Arg Lys Val Ala Thr Ser Asp Ala
 305 310 315

<210> 29
 <211> 984
 <212> DNA
 <213> Homo sapiens

<400> 29
 acatcatcct ctgacttcac cctcctgggg cttctggtga acagtgaggc tgccgggatt 60
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 ttcttgattc aggtggactc tcgcctccac acccccatgt actttctgct cagtcagctg 180
 tccatcatgg acaccctttt catctgtacc actgtcccaa aactcctggc agacatgggt 240
 tctaaagaga agatcatttc ctttgtggcc tgtggcatcc agatcttccct ctacctgacc 300
 atgattgggt ctgagttctt cctcctgggc ctcattggcct atgaccgcta cgtggctgtc 360
 tgtaaccctc tgagataccc agtcctgatg aaccgcaaga agtgtctttt gctggctgct 420
 ggtgcctggg ttgggggctc cctcgatggc tttctgctca ctcccatcac catgaatgtc 480
 ccttactgtg gctcccgaag tatcaaccat tttttctgtg agatcccagc agttctgaaa 540
 ctggcctgtg cagacacgtc cttgtatgaa actctgatgt acatctgctg tgtcctcatg 600
 ttgctcatcc ccactcttat catctccact tctactccc tcactctgtt aaccatccac 660
 cgcattgcct ctgctgaagg tcgcaaaaag gccttcacca cttgttcctc ccacttgact 720
 gtagttagca tcttctatgg ggctgccttc tacacatacg tgctgccccca gtccttccac 780
 acccccgagc aggacaaagt agtgctcagc ttctatacca ttgtcagcc catgcttaat 840
 cctctcatct acagcctcag aaacaaggac gtcatagggg catttaaaaaa ggtatttgca 900
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 ataaggcttc ctaaggactt cctc 984

<210> 30
 <211> 275
 <212> PRT
 <213> Homo sapiens

<400> 30
 Met Ile Phe Leu Ile Gln Val Asp Ser Arg Leu His Thr Pro Met Tyr
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 Phe Leu Leu Ser Gln Leu Ser Ile Met Asp Thr Leu Phe Ile Cys Thr
 20 25 30
 Thr Val Pro Lys Leu Leu Ala Asp Met Val Ser Lys Glu Lys Ile Ile
 35 40 45
 Ser Phe Val Ala Cys Gly Ile Gln Ile Phe Leu Tyr Leu Thr Met Ile
 50 55 60
 Gly Ser Glu Phe Phe Leu Leu Gly Leu Met Ala Tyr Asp Arg Tyr Val
 65 70 75 80
 Ala Val Cys Asn Pro Leu Arg Tyr Pro Val Leu Met Asn Arg Lys Lys
 85 90 95
 Cys Leu Leu Leu Ala Ala Gly Ala Trp Phe Gly Gly Ser Leu Asp Gly
 100 105 110
 Phe Leu Leu Thr Pro Ile Thr Met Asn Val Pro Tyr Cys Gly Ser Arg

115	120	125
Ser Ile Asn His Phe Phe Cys Glu Ile Pro Ala Val Leu Lys Leu Ala		
130	135	140
Cys Ala Asp Thr Ser Leu Tyr Glu Thr Leu Met Tyr Ile Cys Cys Val		
145	150	155
Leu Met Leu Leu Ile Pro Ile Ser Ile Ile Ser Thr Ser Tyr Ser Leu		
165	170	175
Ile Leu Leu Thr Ile His Arg Met Pro Ser Ala Glu Gly Arg Lys Lys		
180	185	190
Ala Phe Thr Thr Cys Ser Ser His Leu Thr Val Val Ser Ile Phe Tyr		
195	200	205
Gly Ala Ala Phe Tyr Thr Tyr Val Leu Pro Gln Ser Phe His Thr Pro		
210	215	220
Glu Gln Asp Lys Val Val Ser Ala Phe Tyr Thr Ile Val Thr Pro Met		
225	230	235
Leu Asn Pro Leu Ile Tyr Ser Leu Arg Asn Lys Asp Val Ile Gly Ala		
245	250	255
Phe Lys Lys Val Phe Ala Cys Cys Ser Ser Ala Arg Lys Val Ala Thr		
260	265	270
Ser Asp Ala		
275		

<210> 31
 <211> 958
 <212> DNA
 <213> Homo sapiens

<400> 31
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 acgcccgttt cccctggctt ctctttgccc tcattctcct ggtctttgtg acctccatag 120
 ccagcaacgt ggtcatgatc attctcatcc acatagactc ccgcctccac acccccatgt 180
 acttctgct cagccagctc tccctcaggg acatcttgta tatttccacc attgtgcca 240
 aaatgctggt cgaccagggtg atgagccaga gagccatttc ctttgctgga tgcactgccc 300
 aacacttcct ctacttgacc ttagcagggg ctgagttcct cctcctagga ctcatgtcct 360
 gtgatcgcta cgtagccatc tgcaaccctc tgcactatcc tgacctcatg agccgcaaga 420
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 cccccgtcac catgcagttc ccttctgtg cctctcgga gatcaaccac ttcttctgctg 540
 aggtgcctgc ccttctgaag ctctcctgca cggacacatc agcctacgag acagccatgt 600
 atgtctgctg tattatgatg ctctcatcc ctttctctgt gatctcgggc tcttacacaa 660
 gaattctcat tactgtttat aggatgagcg aggcagaggg gaggcgaaag gctgtggcca 720
 cctgctcctc acacatgggtg gttgtcagcc tcttctatgg ggctgccatg tacacatacg 780
 tgctgcctca ttcttaccac acccctgagc aggacaaagc tgtatctgcc ttctacacca 840
 tcctcactcc catgctcaat ccactcattt acagccttag gaacaaggat gtcacggggg 900
 ccctacagaa ggttggtggg aggtgtgtgt cctcaggaaa ggtaaccact ttctaaac 958

<210> 32
 <211> 317
 <212> PRT
 <213> Homo sapiens

<400> 32
 Met Glu Gln Ser Asn Tyr Ser Val Tyr Ala Asp Phe Ile Leu Leu Gly
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 20 25 30
 Leu Val Phe Val Thr Ser Ile Ala Ser Asn Val Val Met Ile Ile Leu
 35 40 45
 Ile His Ile Asp Ser Arg Leu His Thr Pro Met Tyr Phe Leu Leu Ser
 50 55 60
 Gln Leu Ser Leu Arg Asp Ile Leu Tyr Ile Ser Thr Ile Val Pro Lys
 65 70 75 80
 Met Leu Val Asp Gln Val Met Ser Gln Arg Ala Ile Ser Phe Ala Gly
 85 90 95
 Cys Thr Ala Gln His Phe Leu Tyr Leu Thr Leu Ala Gly Ala Glu Phe
 100 105 110
 Phe Leu Leu Gly Leu Met Ser Cys Asp Arg Tyr Val Ala Ile Cys Asn
 115 120 125
 Pro Leu His Tyr Pro Asp Leu Met Ser Arg Lys Ile Cys Trp Leu Ile
 130 135 140
 Val Ala Ala Ala Trp Leu Gly Gly Ser Ile Asp Gly Phe Leu Leu Thr
 145 150 155 160
 Pro Val Thr Met Gln Phe Pro Phe Cys Ala Ser Arg Glu Ile Asn His
 165 170 175
 Phe Phe Cys Glu Val Pro Ala Leu Leu Lys Leu Ser Cys Thr Asp Thr
 180 185 190
 Ser Ala Tyr Glu Thr Ala Met Tyr Val Cys Cys Ile Met Met Leu Leu
 195 200 205
 Ile Pro Phe Ser Val Ile Ser Gly Ser Tyr Thr Arg Ile Leu Ile Thr
 210 215 220
 Val Tyr Arg Met Ser Glu Ala Glu Gly Arg Arg Lys Ala Val Ala Thr
 225 230 235 240
 Cys Ser Ser His Met Val Val Val Ser Leu Phe Tyr Gly Ala Ala Met
 245 250 255
 Tyr Thr Tyr Val Leu Pro His Ser Tyr His Thr Pro Glu Gln Asp Lys
 260 265 270

Ala Val Ser Ala Phe Tyr Thr Ile Leu Thr Pro Met Leu Asn Pro Leu
 275 280 285

Ile Tyr Ser Leu Arg Asn Lys Asp Val Thr Gly Ala Leu Gln Lys Val
 290 295 300

Val Gly Arg Cys Val Ser Ser Gly Lys Val Thr Thr Phe
 305 310 315

<210> 33

<211> 958

<212> DNA

<213> Homo sapiens

<400> 33

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 ccagcaacgt ggatcatgatc attctcatcc acatagactc ccgcctccac acccccattgt 180
 acttcctgct cagccagctc tccctcaggg acatcttgta tatttccacc attgtgcca 240
 aaatgctggt cgaccaggtg atgagccaga gagccatttc ctttgctgga tgcactgccc 300
 aacacttcct ctacttgacc ttagcagggg ctgagttctt cctcctagga ctcatgtcct 360
 gtgatcgcta cgtagccatc tgcaaccctc tgcactatcc tgacctcatg agccgcaaga 420
 tctgctgggt gattgtggcg gcagcctggc tgggaggggc tatcgatggt ttcttgctca 480
 cccccgtcac catgcagttc cccttctgtg cctctcggga gatcaaccac ttcttctgcg 540
 aggtgcctgc ccttctgaag ctctcctgca cggacacatc agcctacgag acagccatgt 600
 atgtctgctg tattatgatg ctctcatcc ctttctctgt gatctcgggc tcttacacaa 660
 gaattctcat tactgtttat aggatgagcg aggcagaggg gaggcgaaag gctgtggcca 720
 cctgctcctc acacatggtg gttgtcagcc tcttctatgg ggctgccatg tacacatacg 780
 tgctgcctca ttcttaccac acccctgagc aggacaaagc tgtatctgcc ttctacacca 840
 tctcactcc catgctcaat ccactcattt acagccttag gaacaaggat gtcacggggg 900
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<210> 34

<211> 317

<212> PRT

<213> Homo sapiens

<400> 34

Met Glu Gln Ser Asn Tyr Ser Val Tyr Ala Asp Phe Ile Leu Leu Gly
 1 5 10 15

Leu Phe Ser Asn Ala Arg Phe Pro Trp Leu Leu Phe Ala Leu Ile Leu
 20 25 30

Leu Val Phe Val Thr Ser Ile Ala Ser Asn Val Val Met Ile Ile Leu
 35 40 45

Ile His Ile Asp Ser Arg Leu His Thr Pro Met Tyr Phe Leu Leu Ser
 50 55 60

Gln Leu Ser Leu Arg Asp Ile Leu Tyr Ile Ser Thr Ile Val Pro Lys
 65 70 75 80

Met Leu Val Asp Gln Val Met Ser Gln Arg Ala Ile Ser Phe Ala Gly
 85 90 95

Cys Thr Ala Gln His Phe Leu Tyr Leu Thr Leu Ala Gly Ala Glu Phe
 100 105 110
 Phe Leu Leu Gly Leu Met Ser Cys Asp Arg Tyr Val Ala Ile Cys Asn
 115 120 125
 Pro Leu His Tyr Pro Asp Leu Met Ser Arg Lys Ile Cys Trp Leu Ile
 130 135 140
 Val Ala Ala Ala Trp Leu Gly Gly Ser Ile Asp Gly Phe Leu Leu Thr
 145 150 155 160
 Pro Val Thr Met Gln Phe Pro Phe Cys Ala Ser Arg Glu Ile Asn His
 165 170 175
 Phe Phe Cys Glu Val Pro Ala Leu Leu Lys Leu Ser Cys Thr Asp Thr
 180 185 190
 Ser Ala Tyr Glu Thr Ala Met Tyr Val Cys Cys Ile Met Met Leu Leu
 195 200 205
 Ile Pro Phe Ser Val Ile Ser Gly Ser Tyr Thr Arg Ile Leu Ile Thr
 210 215 220
 Val Tyr Arg Met Ser Glu Ala Glu Gly Arg Arg Lys Ala Val Ala Thr
 225 230 235 240
 Cys Ser Ser His Met Val Val Val Ser Leu Phe Tyr Gly Ala Ala Met
 245 250 255
 Tyr Thr Tyr Val Leu Pro His Ser Tyr His Thr Pro Glu Gln Asp Lys
 260 265 270
 Ala Val Ser Ala Phe Tyr Thr Ile Leu Thr Pro Met Leu Asn Pro Leu
 275 280 285
 Ile Tyr Ser Leu Arg Asn Lys Asp Val Thr Gly Ala Leu Gln Lys Val
 290 295 300
 Val Gly Arg Cys Val Ser Ser Gly Lys Val Thr Thr Phe
 305 310 315

<210> 35

<211> 938

<212> DNA

<213> Homo sapiens

<400> 35

aacatggaaa gcaatcagac ctggatcaca gaagtcatcc tgttgggatt ccaggtggac 60
 ccagctctgg agttgttcct ctttgggttt ttcttgctat tctacagctt aaccctgatg 120
 ggaaatggga ttatcctggg gtcacatctac ttggactcta gactgcacac acccatgtat 180
 gtcttctctgt cacacctggc cattgtggac atgtcctatg cctcgagtac tgtccctaag 240
 atgctagcaa atcttgtgat gcacaaaaaa gtcacatcct ttgctccttg catacttcag 300
 acttttttgt atttggcggt tgctattaca gagtgtctga ttttgggtgat gatgtgctat 360
 gatcggtatg tggcaatctg tcacccttg caatacacc tcattatgaa ctggagagtg 420

tgcactgtcc tggcctcaac ttgctggata tttagctttc tcttggtctt ggtccatatt 480
 actcttattc tgaggtgcc tttttgtggc ccacaaaaga tcaaccactt tttctgtcaa 540
 atcatgtccg tattcaaatt ggctgtgct gacactaggc tcaaccaggt ggtcctattt 600
 gcgggttctg cgttcatctt agtggggccg ctctgcctgg tgctgggtctc ctacttgac 660
 atcctggtgg ccatcttgag gatccagtct ggggagggcc gcagaaaggc cttctctacc 720
 tgctcctccc acctctgcgt ggtggggctt ttctttggca gcgccattgt catgtacatg 780
 gcccccaagt caaaccattc tcaagaacgg aggaagatcc tttccctggt ttacagcctt 840
 ttcaaccga tcctgaaccc cctcatctac agccttagga atgcagaggt gaaaggggct 900
 ctaaagagag tcctttggaa acagagatca atgtgaag 938

<210> 36

<211> 310

<212> PRT

<213> Homo sapiens

<400> 36

Met Glu Ser Asn Gln Thr Trp Ile Thr Glu Val Ile Leu Leu Gly Phe
 1 5 10 15

Gln Val Asp Pro Ala Leu Glu Leu Phe Leu Phe Gly Phe Phe Leu Leu
 20 25 30

Phe Tyr Ser Leu Thr Leu Met Gly Asn Gly Ile Ile Leu Gly Leu Ile
 35 40 45

Tyr Leu Asp Ser Arg Leu His Thr Pro Met Tyr Val Phe Leu Ser His
 50 55 60

Leu Ala Ile Val Asp Met Ser Tyr Ala Ser Ser Thr Val Pro Lys Met
 65 70 75 80

Leu Ala Asn Leu Val Met His Lys Lys Val Ile Ser Phe Ala Pro Cys
 85 90 95

Ile Leu Gln Thr Phe Leu Tyr Leu Ala Phe Ala Ile Thr Glu Cys Leu
 100 105 110

Ile Leu Val Met Met Cys Tyr Asp Arg Tyr Val Ala Ile Cys His Pro
 115 120 125

Leu Gln Tyr Thr Leu Ile Met Asn Trp Arg Val Cys Thr Val Leu Ala
 130 135 140

Ser Thr Cys Trp Ile Phe Ser Phe Leu Leu Ala Leu Val His Ile Thr
 145 150 155 160

Leu Ile Leu Arg Leu Pro Phe Cys Gly Pro Gln Lys Ile Asn His Phe
 165 170 175

Phe Cys Gln Ile Met Ser Val Phe Lys Leu Ala Cys Ala Asp Thr Arg
 180 185 190

Leu Asn Gln Val Val Leu Phe Ala Gly Ser Ala Phe Ile Leu Val Gly
 195 200 205

Pro Leu Cys Leu Val Leu Val Ser Tyr Leu His Ile Leu Val Ala Ile

210	215	220
Leu Arg Ile Gln Ser Gly Glu Gly Arg Arg Lys Ala Phe Ser Thr Cys		
225	230	235 240
Ser Ser His Leu Cys Val Val Gly Leu Phe Phe Gly Ser Ala Ile Val		
	245	250 255
Met Tyr Met Ala Pro Lys Ser Asn His Ser Gln Glu Arg Arg Lys Ile		
	260	265 270
Leu Ser Leu Phe Tyr Ser Leu Phe Asn Pro Ile Leu Asn Pro Leu Ile		
	275	280 285
Tyr Ser Leu Arg Asn Ala Glu Val Lys Gly Ala Leu Lys Arg Val Leu		
	290	295 300
Trp Lys Gln Arg Ser Met		
305	310	

<210> 37
 <211> 940
 <212> DNA
 <213> Homo sapiens

<400> 37

ggaaatgggg	gaaaatcaga	caatgggtcac	agagtctctc	ctactgggat	ttctcctggg	60
cccaaggatt	cagatgctcc	tctttgggct	cttctccctg	ttctatatct	tcaccctgct	120
ggggaatggg	accatcctgg	ggctcatctc	actggactcc	agactccaca	cccccatgta	180
cttcttcttc	tcacacctgg	ctgtcgtaaa	catcgcttat	gcctgcaaca	cagtgcccca	240
gatgctggcg	aacctcctgc	atccagccaa	gcccatctcc	tttgctggct	gcatgacgca	300
gacctttctc	tttttgagtt	ttggacacag	cgaatgtctc	ctgctgggtg	tgatgtccta	360
cgatcggtac	gtggccatct	gccacctctc	ccgatatttc	atcatcatga	cctggaaagt	420
ctgcatcact	ctggccatca	cttctcggac	gtgtggctcc	ctcctggctc	tggtccatgt	480
ggttctcatc	ctaagactgc	ccttctgtgg	gcctcatgaa	atcaaccact	tcttctgtga	540
aatcctgtct	gtctcaggc	tggcctgtgc	tgatacctgg	ctcaaccagg	tggtcatctt	600
tgcagcctgc	atgttcttcc	tgggtgggacc	accagcctg	gtgcttgtct	cctactcgca	660
catcctggcg	gccatcctga	ggatccagtc	tggggagggc	cgcagaaagg	ccttctccac	720
ctgctcctcc	cacctctgcg	tagtgggact	cttctttggc	agcgccatcg	tcatgtacat	780
ggcccctaag	tcccgccatc	ctgaggagca	gcagaaggtc	ctttttctat	tttacagttc	840
tttcaaccca	acacttaacc	ccctgattta	caacctgagg	aatgtagagg	tcaaggggtg	900
cctgaggaga	gcactgtgca	aggaaagtca	ttcctaagag			940

<210> 38
 <211> 310
 <212> PRT
 <213> Homo sapiens

<400> 38

Met Gly Glu Asn Gln Thr Met Val Thr Glu Phe Leu Leu Leu Gly Phe
1 5 10 15
Leu Leu Gly Pro Arg Ile Gln Met Leu Leu Phe Gly Leu Phe Ser Leu
20 25 30

Phe Tyr Ile Phe Thr Leu Leu Gly Asn Gly Thr Ile Leu Gly Leu Ile
 35 40 45
 Ser Leu Asp Ser Arg Leu His Thr Pro Met Tyr Phe Phe Leu Ser His
 50 55 60
 Leu Ala Val Val Asn Ile Ala Tyr Ala Cys Asn Thr Val Pro Gln Met
 65 70 75 80
 Leu Ala Asn Leu Leu His Pro Ala Lys Pro Ile Ser Phe Ala Gly Cys
 85 90 95
 Met Thr Gln Thr Phe Leu Phe Leu Ser Phe Gly His Ser Glu Cys Leu
 100 105 110
 Leu Leu Val Leu Met Ser Tyr Asp Arg Tyr Val Ala Ile Cys His Pro
 115 120 125
 Leu Arg Tyr Phe Ile Ile Met Thr Trp Lys Val Cys Ile Thr Leu Ala
 130 135 140
 Ile Thr Ser Trp Thr Cys Gly Ser Leu Leu Ala Leu Val His Val Val
 145 150 155 160
 Leu Ile Leu Arg Leu Pro Phe Cys Gly Pro His Glu Ile Asn His Phe
 165 170 175
 Phe Cys Glu Ile Leu Ser Val Leu Arg Leu Ala Cys Ala Asp Thr Trp
 180 185 190
 Leu Asn Gln Val Val Ile Phe Ala Ala Cys Met Phe Phe Leu Val Gly
 195 200 205
 Pro Pro Ser Leu Val Leu Val Ser Tyr Ser His Ile Leu Ala Ala Ile
 210 215 220
 Leu Arg Ile Gln Ser Gly Glu Gly Arg Arg Lys Ala Phe Ser Thr Cys
 225 230 235 240
 Ser Ser His Leu Cys Val Val Gly Leu Phe Phe Gly Ser Ala Ile Val
 245 250 255
 Met Tyr Met Ala Pro Lys Ser Arg His Pro Glu Glu Gln Gln Lys Val
 260 265 270
 Leu Phe Leu Phe Tyr Ser Ser Phe Asn Pro Thr Leu Asn Pro Leu Ile
 275 280 285
 Tyr Asn Leu Arg Asn Val Glu Val Lys Gly Ala Leu Arg Arg Ala Leu
 290 295 300
 Cys Lys Glu Ser His Ser
 305 310

<210> 39

<211> 312

<212> PRT

<213> Mus musculus

<400> 39

Met Glu Pro Ser Asn Arg Thr Ala Val Ser Glu Phe Val Leu Lys Gly
1 5 10 15

Phe Ser Gly Tyr Pro Ala Leu Glu Arg Leu Leu Phe Pro Leu Cys Ser
20 25 30

Val Met Tyr Leu Val Thr Leu Leu Gly Asn Thr Ala Ile Val Ala Val
35 40 45

Ser Met Leu Asp Ala Arg Leu His Thr Pro Met Tyr Phe Phe Leu Gly
50 55 60

Asn Leu Ser Ile Leu Asp Ile Cys Tyr Thr Ser Thr Phe Val Pro Leu
65 70 75 80

Met Leu Val His Leu Leu Ser Ser Arg Lys Thr Ile Ser Phe Thr Gly
85 90 95

Cys Ala Val Gln Met Cys Leu Ser Leu Ser Thr Gly Ser Thr Glu Cys
100 105 110

Leu Leu Leu Ala Val Met Ala Tyr Asp Arg Tyr Leu Ala Ile Cys Gln
115 120 125

Pro Leu Arg Tyr Pro Val Leu Met Ser His Arg Leu Cys Leu Met Leu
130 135 140

Ala Gly Ala Ser Trp Val Leu Cys Leu Phe Lys Ser Val Ala Glu Thr
145 150 155 160

Val Ile Ala Met Arg Leu Pro Phe Cys Gly His His Val Ile Arg His
165 170 175

Phe Thr Cys Glu Ile Leu Ala Val Leu Lys Leu Thr Cys Gly Asp Thr
180 185 190

Ser Val Ser Asp Ala Phe Leu Leu Val Gly Ala Ile Leu Leu Leu Pro
195 200 205

Ile Pro Leu Thr Leu Ile Cys Leu Ser Tyr Met Leu Ile Leu Ala Thr
210 215 220

Ile Leu Arg Val Pro Ser Ala Thr Gly Arg Ser Lys Ala Phe Ser Thr
225 230 235 240

Cys Ser Ala His Leu Ala Val Val Leu Leu Phe Tyr Ser Thr Ile Ile
245 250 255

Phe Met Tyr Met Lys Pro Lys Ser Lys Glu Ala Arg Ile Ser Asp Gln
260 265 270

Val Phe Thr Val Leu Tyr Ala Val Val Thr Pro Met Leu Asn Pro Ile
275 280 285

Ile Tyr Ser Leu Arg Asn Lys Glu Val Lys Glu Ala Ala Arg Lys Ala
 290 295 300

Trp Gly Ser Arg Trp Ala Cys Arg
 305 310

<210> 40
 <211> 315
 <212> PRT
 <213> Mus musculus

<400> 40
 Met Ala Gly Thr Asn His Thr Glu Val Ile Glu Tyr Val Leu Leu Gly
 1 5 10 15

Leu Gln Asp His His Gly Leu Glu Ile Ala Leu Phe Val Leu Cys Leu
 20 25 30

Gly Ile Tyr Cys Met Thr Leu Leu Gly Asn Ser Phe Leu Val Gly Leu
 35 40 45

Ile Val Leu Asp Thr His Leu His Ser Pro Met Tyr Phe Phe Ile Ser
 50 55 60

Asn Leu Ser Leu Ile Asp Ile Cys Gly Thr Ser Ser Phe Thr Pro Met
 65 70 75 80

Met Leu Leu Asn Phe Leu Asp Val Gln Arg Thr Ile Ser Phe Pro Ser
 85 90 95

Cys Ala Leu Gln Met Tyr Leu Thr Leu Ala Leu Gly Thr Thr Glu Cys
 100 105 110

Leu Leu Leu Ala Val Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Gln
 115 120 125

Pro Leu Arg Tyr Pro Glu Leu Val Asn Gly Arg Tyr Ala Ser Arg Trp
 130 135 140

Gln Asp Lys Leu Gly Thr Gly Phe Ala Asn Ser Leu Leu His Ser Ile
 145 150 155 160

Leu Val Trp His Leu Pro Phe Cys Gly His Tyr Ile Ile Asn His Phe
 165 170 175

Phe Cys Glu Ile Leu Ala Val Leu Lys Leu Ala Cys Gly Asp Ile Ser
 180 185 190

Leu Asn Ala Leu Ile Leu Thr Val Ala Thr Ala Val Leu Thr Met Thr
 195 200 205

Pro Leu Leu Leu Ile Cys Leu Ser Tyr Ile Phe Ile Leu Ala Ala Ile
 210 215 220

Leu Arg Val Pro Ser Ala Ala Gly Arg Ser Lys Ala Phe Ser Thr Cys

225		230		235		240									
Ser	Ala	His	Leu	Thr	Val	Val	Val	Ile	Phe	Tyr	Gly	Thr	Ile	Thr	Phe
				245					250					255	
Met	Tyr	Leu	Lys	Pro	Lys	Asp	Gln	Asp	Pro	Ser	Val	Gly	Lys	Ile	Ile
			260					265					270		
Thr	Leu	Leu	Tyr	Ala	Ile	Val	Ala	Pro	Ser	Leu	Asn	Ala	Phe	Ile	Tyr
		275					280					285			
Ser	Leu	Arg	Asn	Ser	Glu	Val	Lys	Ala	Ala	Val	Thr	Ala	Leu	Leu	Trp
	290					295					300				
Gly	Gly	Leu	Leu	Thr	Arg	Lys	Met	Ser	His	Phe					
305					310					315					

<210> 41
 <211> 318
 <212> PRT
 <213> Mus musculus

<400> 41
Met Glu Gly Ala Asn Gln Ser Thr Val Ala Glu Phe Val Leu Leu Gly
1 5 10 15
Leu Ser Asp His Pro Lys Leu Glu Lys Thr Phe Phe Val Leu Ile Leu
20 25 30
Leu Met Tyr Leu Val Ile Leu Leu Gly Asn Gly Val Leu Ile Leu Val
35 40 45
Ser Ile Leu Asp Ser His Leu His Thr Pro Met Tyr Phe Phe Leu Gly
50 55 60
Asp Leu Ser Phe Leu Asp Ile Cys Tyr Thr Thr Ser Ser Ile Pro Leu
65 70 75 80
Val Leu Asp Gly Phe Leu Thr Pro Arg Lys Thr Ile Ser Phe Ser Gly
85 90 95
Cys Ala Val Gln Met Phe Leu Ser Phe Ala Met Gly Ala Thr Glu Cys
100 105 110
Val Leu Leu Gly Met Met Ala Phe Asp Arg Tyr Val Ala Ile Cys Asn
115 120 125
Pro Leu Arg Tyr Pro Val Val Met Asn Lys Ser Ala Tyr Val Pro Met
130 135 140
Ala Val Ser Ser Trp Val Ala Gly Gly Ala Asn Ser Leu Val Gln Ile
145 150 155 160
Ser Leu Ala Val Gln Leu Pro Phe Cys Gly Asp Asn Val Ile Asn His
165 170 175

Phe Thr Cys Glu Ile Leu Ala Val Leu Lys Leu Ala Cys Ala Asp Ile
 180 185 190
 Ser Ile Asn Val Ile Ser Met Gly Val Ala Asn Val Ile Phe Leu Gly
 195 200 205
 Val Pro Val Leu Phe Ile Phe Val Ser Tyr Ile Phe Ile Leu Ser Thr
 210 215 220
 Ile Leu Arg Ile Pro Ser Ala Glu Gly Arg Lys Lys Ala Phe Ser Thr
 225 230 235 240
 Cys Ser Ala His Leu Thr Val Val Leu Val Phe Tyr Gly Thr Ile Leu
 245 250 255
 Phe Met Tyr Gly Lys Pro Lys Ser Lys Asp Pro Leu Gly Ala Asp Lys
 260 265 270
 Gln Asp Val Ser Asp Lys Leu Ile Ser Leu Phe Tyr Gly Val Leu Thr
 275 280 285
 Pro Met Leu Asn Pro Ile Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys
 290 295 300
 Ala Ala Val Arg Asn Leu Val Gly Gln Lys Cys Leu Ile Gln
 305 310 315

<210> 42

<211> 318

<212> PRT

<213> Mus musculus

<400> 42

Met Asp Val Ser Asn Gln Thr Thr Val Thr Glu Phe Val Leu Leu Gly
 1 5 10 15
 Leu Ser Ala His Pro Lys Leu Glu Lys Thr Phe Phe Val Leu Ile Leu
 20 25 30
 Ser Met Tyr Leu Val Ile Leu Leu Gly Asn Gly Val Leu Ile Leu Val
 35 40 45
 Ser Ile Leu Asp Ser His Leu His Thr Pro Met Tyr Phe Phe Leu Gly
 50 55 60
 Asn Leu Ser Phe Leu Asp Ile Cys Tyr Thr Thr Ser Ser Val Pro Leu
 65 70 75 80
 Val Leu Asp Gly Phe Leu Thr Pro Arg Lys Thr Ile Ser Phe Ser Gly
 85 90 95
 Cys Ala Val Gln Met Phe Leu Ser Phe Ala Met Gly Ala Thr Glu Cys
 100 105 110
 Val Leu Leu Gly Met Met Ala Phe Asp Arg Tyr Val Ala Ile Cys Asn
 115 120 125

Pro Leu Arg Tyr Pro Val Val Met Asn Lys Ala Ala Tyr Val Pro Met
 130 135 140
 Ala Val Ser Ser Trp Val Ala Gly Gly Ala Asn Ser Leu Val Gln Ile
 145 150 155 160
 Ser Leu Ala Val Gln Leu Pro Phe Cys Gly Asp Asn Val Ile Asn His
 165 170 175
 Phe Ile Cys Glu Ile Leu Ala Val Leu Lys Leu Ala Cys Ala Asp Ile
 180 185 190
 Ser Ile Asn Val Ile Ser Met Gly Val Ala Asn Val Ile Phe Leu Gly
 195 200 205
 Val Pro Val Leu Phe Ile Phe Val Ser Tyr Ile Phe Ile Leu Ser Thr
 210 215 220
 Ile Leu Arg Ile Pro Ser Ala Glu Gly Arg Lys Lys Ala Phe Ser Thr
 225 230 235 240
 Cys Ser Ala His Leu Thr Val Val Ile Ile Phe Tyr Gly Thr Ile Leu
 245 250 255
 Phe Met Tyr Gly Lys Pro Lys Ser Lys Asp Pro Leu Gly Ala Asp Lys
 260 265 270
 Gln Asp Leu Ala Asp Lys Leu Ile Ser Leu Phe Tyr Gly Leu Leu Thr
 275 280 285
 Pro Met Leu Asn Pro Ile Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys
 290 295 300
 Ala Ala Val Arg Asn Leu Ala Ser His Arg Cys Leu Thr Phe
 305 310 315

<210> 43
 <211> 319
 <212> PRT
 <213> Mus musculus

<400> 43
 Met Asp Arg Ser Asn Glu Thr Ala Pro Leu Ser Gly Phe Ile Leu Leu
 1 5 10 15
 Gly Leu Ser Ala His Pro Lys Leu Glu Lys Thr Phe Phe Val Leu Ile
 20 25 30
 Leu Met Met Tyr Leu Val Ile Leu Leu Gly Asn Gly Val Leu Ile Leu
 35 40 45
 Val Ser Ile Leu Asp Ser His Leu His Thr Pro Met Tyr Phe Phe Leu
 50 55 60
 Gly Asn Leu Ser Phe Leu Asp Ile Cys Tyr Thr Thr Ser Ser Val Pro

65		70		75		80
Leu Ile Leu Asp Ser Phe Leu Thr Pro Arg Lys Thr Ile Ser Phe Ser						
	85			90		95
Gly Cys Ala Val Gln Met Phe Leu Ser Phe Ala Met Gly Ala Thr Glu						
	100		105		110	
Cys Val Leu Leu Ser Met Met Ala Phe Asp Arg Tyr Val Ala Ile Cys						
	115		120		125	
Asn Pro Leu Arg Tyr Pro Val Val Met Asn Lys Ala Ala Tyr Val Pro						
	130		135		140	
Met Ala Ala Ser Ser Trp Ala Gly Gly Ile Thr Asn Ser Val Val Gln						
145		150		155		160
Thr Ser Leu Ala Met Arg Leu Pro Phe Cys Gly Asp Asn Val Ile Asn						
	165		170		175	
His Phe Thr Cys Glu Ile Leu Ala Val Leu Lys Leu Ala Cys Ala Asp						
	180		185		190	
Ile Ser Ile Asn Val Ile Ser Met Val Val Ala Asn Met Ile Phe Leu						
	195		200		205	
Ala Val Pro Val Leu Phe Ile Phe Val Ser Tyr Val Phe Ile Leu Val						
	210		215		220	
Thr Ile Leu Arg Ile Pro Ser Ala Glu Gly Arg Lys Lys Ala Phe Ser						
225		230		235		240
Thr Cys Ser Ala His Leu Thr Val Val Leu Val Phe Tyr Gly Thr Ile						
	245		250		255	
Leu Phe Met Tyr Gly Lys Pro Lys Ser Lys Asp Pro Leu Gly Ala Asp						
	260		265		270	
Lys Gln Asp Leu Ala Asp Lys Leu Ile Ser Leu Phe Tyr Gly Val Val						
	275		280		285	
Thr Pro Met Leu Asn Pro Ile Ile Tyr Ser Leu Arg Asn Lys Asp Val						
	290		295		300	
Arg Ala Ala Val Arg Asn Leu Val Gly Gln Lys His Leu Thr Glu						
305		310		315		

<210> 44
 <211> 313
 <212> PRT
 <213> Rattus norvegicus

<400> 44
 Met Ser Val Ala Asn Glu Ser Ile Ser Arg Glu Phe Ile Leu Leu Gly
 1 5 10 15

Phe Ser Asp Arg Pro Trp Leu Glu Leu Pro Leu Phe Val Val Phe Leu
20 25 30
Val Ser Tyr Ile Leu Thr Ile Phe Gly Asn Met Met Ile Ile Leu Val
35 40 45
Ser Arg Leu Asp Ser Lys Leu His Thr Pro Met Tyr Phe Phe Leu Thr
50 55 60
Asn Leu Ser Leu Leu Asp Leu Cys Tyr Thr Thr Ser Thr Val Pro Gln
65 70 75 80
Met Leu Ile Asn Ile Cys Ser Thr Arg Lys Val Ile Ser Tyr Gly Gly
85 90 95
Cys Val Val Gln Leu Phe Ile Phe Leu Ser Leu Gly Ser Thr Glu Cys
100 105 110
Phe Leu Leu Gly Val Met Ser Leu Asp Arg Phe Leu Ala Ile Cys Arg
115 120 125
Pro Leu His Tyr Ser Val Ile Met His Gln Arg Arg Cys Leu His Leu
130 135 140
Ala Ala Ala Cys Trp Ile Ser Gly Phe Ser Asn Ser Val Leu Gln Ser
145 150 155 160
Thr Trp Thr Leu Gln Met Pro Leu Cys Gly His Lys Glu Val Asp His
165 170 175
Phe Phe Cys Glu Val Pro Ala Leu Leu Lys Leu Ser Cys Val Asp Thr
180 185 190
Thr Ala Asn Glu Ala Glu Leu Phe Phe Ile Ser Val Leu Phe Leu Leu
195 200 205
Ile Pro Val Thr Leu Ile Leu Ile Ser Tyr Ala Phe Ile Val Gln Ala
210 215 220
Val Leu Lys Ile Arg Ser Ala Glu Cys Arg Arg Lys Ala Phe Gly Thr
225 230 235 240
Cys Gly Ser His Leu Ile Val Val Val Leu Phe Tyr Gly Thr Ala Ile
245 250 255
Tyr Met Tyr Leu Gln Pro Pro Ser Pro Ser Ser Lys Asp Arg Gly Lys
260 265 270
Met Val Ser Leu Phe Tyr Gly Ile Ile Thr Pro Met Leu Asn Pro Leu
275 280 285
Ile Tyr Thr Leu Arg Asn Glu Glu Val Lys Gly Ala Phe Lys Arg Leu
290 295 300
Met Lys Arg Ile Ile Leu Ile Gly Lys
305 310

<210> 45
 <211> 316
 <212> PRT
 <213> Homo sapiens

<400> 45

Met Asp Asn Gln Ser Ser Thr Pro Gly Phe Leu Leu Leu Gly Phe Ser
 1 5 10 15

Glu His Pro Gly Leu Glu Arg Thr Leu Phe Val Val Val Phe Thr Ser
 20 25 30

Tyr Leu Leu Thr Leu Val Gly Asn Thr Leu Ile Ile Leu Leu Ser Ala
 35 40 45

Leu Asp Pro Lys Leu His Ser Pro Met Tyr Phe Phe Leu Ser Asn Leu
 50 55 60

Ser Phe Leu Asp Leu Cys Phe Thr Thr Ser Cys Val Pro Gln Met Leu
 65 70 75 80

Val Asn Leu Trp Gly Pro Lys Lys Thr Ile Ser Phe Leu Asp Cys Ser
 85 90 95

Val Gln Ile Phe Ile Phe Leu Ser Leu Gly Thr Thr Glu Cys Ile Leu
 100 105 110

Leu Thr Val Met Ala Phe Asp Arg Tyr Val Ala Val Cys Gln Pro Leu
 115 120 125

His Tyr Ala Thr Ile Ile His Pro Arg Leu Cys Trp Gln Leu Ala Ser
 130 135 140

Val Ala Trp Val Ile Gly Leu Val Glu Ser Val Val Gln Thr Pro Ser
 145 150 155 160

Thr Leu His Leu Pro Phe Cys Pro Asp Arg Gln Val Asp Asp Phe Val
 165 170 175

Cys Glu Val Pro Ala Leu Ile Arg Leu Ser Cys Glu Asp Thr Ser Tyr
 180 185 190

Asn Glu Ile Gln Val Ala Val Ala Ser Val Phe Ile Leu Val Val Pro
 195 200 205

Leu Ser Leu Ile Leu Val Ser Tyr Gly Ala Ile Thr Trp Ala Val Leu
 210 215 220

Arg Ile Asn Ser Ala Lys Gly Arg Arg Lys Ala Phe Gly Thr Cys Ser
 225 230 235 240

Ser His Leu Thr Val Val Thr Leu Phe Tyr Ser Ser Val Ile Ala Val
 245 250 255

Tyr Leu Gln Pro Lys Asn Pro Tyr Ala Gln Glu Arg Gly Lys Phe Phe
 260 265 270

Gly Leu Phe Tyr Ala Val Gly Thr Pro Ser Leu Asn Pro Leu Ile Tyr
 275 280 285

Thr Leu Arg Asn Lys Glu Val Thr Arg Ala Phe Arg Arg Leu Leu Gly
 290 295 300

Lys Glu Arg Asp Ser Arg Glu Ser Trp Arg Ala Ala
 305 310 315

<210> 46

<211> 312

<212> PRT

<213> Homo sapiens

<400> 46

Met Val Asn Gln Ser Ser Thr Pro Gly Phe Leu Leu Leu Gly Phe Ser
 1 5 10 15

Glu His Pro Gly Leu Glu Arg Thr Leu Phe Val Val Val Phe Thr Ser
 20 25 30

Tyr Leu Leu Thr Leu Val Gly Asn Thr Leu Ile Ile Leu Leu Ser Ala
 35 40 45

Leu Asp Pro Lys Leu His Ser Pro Met Tyr Phe Phe Leu Ser Asn Leu
 50 55 60

Ser Phe Leu Asp Leu Cys Phe Thr Thr Ser Cys Val Pro Gln Met Leu
 65 70 75 80

Val Asn Leu Trp Gly Pro Lys Lys Thr Ile Ser Phe Leu Asp Cys Ser
 85 90 95

Val Gln Ile Phe Ile Phe Leu Ser Leu Gly Thr Thr Glu Cys Ile Leu
 100 105 110

Leu Thr Val Met Ala Phe Asp Arg Tyr Val Ala Val Cys Gln Pro Leu
 115 120 125

His Tyr Ala Thr Ile Ile His Pro Arg Leu Cys Trp Gln Leu Ala Ser
 130 135 140

Val Ala Trp Val Ile Gly Leu Val Glu Ser Val Val Gln Thr Pro Ser
 145 150 155 160

Thr Leu His Leu Pro Phe Cys Pro Asp Arg Gln Val Asp Asp Phe Val
 165 170 175

Cys Glu Val Pro Ala Leu Ile Arg Leu Ser Cys Glu Asp Thr Ser Tyr
 180 185 190

Asn Glu Ile Gln Val Ala Val Ala Ser Val Phe Ile Leu Val Val Pro
 195 200 205

Leu Ser Leu Ile Leu Val Ser Tyr Gly Ala Ile Thr Trp Ala Val Leu

210	215	220
Arg Ile Asn Ser Ala Lys Gly Arg Arg Lys Ala Phe Gly Thr Cys Ser		
225	230	235 240
Ser His Leu Thr Val Val Thr Leu Phe Tyr Ser Ser Val Ile Ala Val		
	245	250 255
Tyr Leu Gln Pro Lys Asn Pro Tyr Ala Gln Glu Arg Gly Lys Phe Phe		
	260	265 270
Gly Leu Phe Tyr Ala Val Gly Thr Pro Ser Leu Asn Pro Leu Ile Tyr		
	275	280 285
Thr Leu Arg Asn Lys Glu Val Thr Arg Ala Phe Arg Arg Leu Leu Gly		
	290	295 300
Lys Glu Met Gly Leu Thr Gln Ser		
305	310	

<210> 47
 <211> 310
 <212> PRT
 <213> Mus musculus

<400> 47
 Met Val Asn Gln Ser Ser Pro Val Gly Phe Leu Leu Leu Gly Phe Ser
 1 5 10 15

Glu His Pro Gln Leu Glu Lys Val Leu Ile Val Val Val Leu Cys Ser
 20 25 30

Tyr Leu Leu Thr Leu Leu Gly Asn Thr Leu Ile Leu Leu Leu Ser Thr
 35 40 45

Leu Asp Pro Arg Leu His Ser Pro Met Tyr Phe Phe Leu Ser Asn Leu
 50 55 60

Ser Phe Leu Asp Leu Cys Phe Thr Thr Thr Cys Val Pro Gln Met Leu
 65 70 75 80

Phe Asn Leu Trp Gly Pro Ala Lys Thr Ile Ser Phe Leu Gly Cys Phe
 85 90 95

Val Gln Leu Phe Ile Phe Leu Ser Leu Gly Thr Thr Glu Cys Ile Leu
 100 105 110

Leu Ala Val Met Ser Phe Asp Arg Tyr Val Ala Val Cys Gln Pro Leu
 115 120 125

His Tyr Ala Thr Val Ile His Pro Arg Leu Cys Cys Gln Leu Ala Ala
 130 135 140

Val Ala Cys Thr Ile Gly Leu Val Glu Ser Val Val Gln Thr Pro Ser
 145 150 155 160

Thr Leu Arg Leu Pro Phe Cys Pro His His Gln Val Asp Asp Phe Val
 165 170 175
 Cys Glu Val Pro Ala Leu Ile Arg Leu Ser Cys Gly Asp Thr Thr Tyr
 180 185 190
 Asn Glu Ile Gln Met Ala Val Ala Ser Val Phe Ile Leu Val Val Pro
 195 200 205
 Leu Ser Leu Ile Leu Val Ser Tyr Gly Ala Ile Ala Arg Ala Val Leu
 210 215 220
 Arg Ile Ser Ser Ala Lys Gly Arg Arg Lys Ala Phe Gly Thr Cys Ser
 225 230 235 240
 Ser His Leu Ile Val Val Thr Leu Phe Tyr Ser Ser Val Ile Ala Val
 245 250 255
 Tyr Leu Gln Pro Lys Asn Pro Tyr Ala Arg Glu Arg Gly Lys Phe Phe
 260 265 270
 Gly Leu Phe Tyr Ala Val Gly Thr Pro Ser Leu Asn Pro Leu Ile Tyr
 275 280 285
 Thr Leu Arg Asn Lys Glu Val Lys Arg Ala Phe Arg Arg Leu Leu Trp
 290 295 300
 Lys Glu Val Lys Pro Ser
 305 310

<210> 48
 <211> 312
 <212> PRT
 <213> Mus musculus

<400> 48
 Met Val Asn Gln Ser Ser Pro Val Val Phe Phe Leu Leu Gly Phe Ser
 1 5 10 15
 Glu His Pro Gln Leu Lys Lys Val Leu Phe Val Val Val Leu Cys Ser
 20 25 30
 Tyr Leu Leu Thr Leu Leu Gly Asn Thr Leu Ile Leu Leu Leu Ser Thr
 35 40 45
 Leu Asp Pro Arg Leu His Ser Pro Met Tyr Phe Phe Leu Ser Asn Leu
 50 55 60
 Ser Phe Leu Asp Leu Cys Phe Thr Thr Thr Cys Val Pro Gln Met Leu
 65 70 75 80
 Phe Asn Leu Trp Gly Pro Ala Lys Thr Ile Ser Phe Leu Gly Cys Phe
 85 90 95
 Val Gln Leu Phe Ile Phe Met Ser Leu Gly Thr Thr Glu Cys Ile Leu
 100 105 110

Leu Thr Val Met Ala Phe Asp Arg Tyr Val Ala Val Cys Gln Pro Leu
 115 120 125
 His Tyr Ala Thr Lys Ile Asn Pro His Leu Cys Arg Gln Leu Ala Gly
 130 135 140
 Ile Ala Trp Ala Ile Gly Leu Val Gln Ser Ile Val Gln Thr Pro Pro
 145 150 155 160
 Thr Leu Lys Leu Pro Phe Cys Ser His Arg Gln Ile Asp Asn Phe Leu
 165 170 175
 Cys Glu Val Pro Ser Leu Ile Gln Leu Ser Cys Gly Asp Thr Thr Tyr
 180 185 190
 Asn Glu Ile Gln Met Ala Val Ala Ser Ile Phe Ile Val Val Val Pro
 195 200 205
 Leu Ser Leu Ile Leu Val Ser Tyr Gly Ala Ile Ala Arg Ala Val Leu
 210 215 220
 Lys Ile Ser Ser Ala Lys Gly Arg Arg Lys Ala Phe Gly Thr Cys Ser
 225 230 235 240
 Ser His Leu Ile Val Val Thr Leu Phe Tyr Ser Ser Val Ile Ala Val
 245 250 255
 Tyr Leu Gln Pro Lys Asn Pro Tyr Ala Arg Glu Arg Gly Lys Phe Phe
 260 265 270
 Gly Leu Phe Tyr Ala Val Gly Thr Pro Thr Leu Asn Pro Leu Val Tyr
 275 280 285
 Thr Leu Arg Asn Lys Glu Val Lys Arg Ala Phe Trp Lys Leu Leu Arg
 290 295 300
 Lys Asp Glu Asp Ser Glu Glu Ser
 305 310

<210> 49
 <211> 312
 <212> PRT
 <213> Mus musculus

<400> 49
 Met Glu Val Asp Ser Asn Ser Ser Ser Gly Thr Phe Ile Leu Met Gly
 1 5 10 15
 Val Ser Asp His Pro His Leu Glu Ile Ile Phe Phe Ala Val Ile Leu
 20 25 30
 Ala Ser Tyr Leu Leu Thr Leu Val Gly Asn Leu Thr Ile Ile Leu Leu
 35 40 45
 Ser Arg Leu Asp Ala Arg Leu His Thr Pro Met Tyr Phe Phe Leu Ser

50	55	60
Asn Leu Ser Ser Leu Asp Leu Ala Phe Thr Thr Ser Ser Val Pro Gln		
65	70	75 80
Met Leu Lys Asn Leu Trp Gly Pro Asp Lys Thr Ile Ser Tyr Gly Gly		
	85	90 95
Cys Val Thr Gln Leu Tyr Val Phe Leu Trp Leu Gly Ala Thr Glu Cys		
	100	105 110
Ile Leu Leu Val Val Met Ala Phe Asp Arg Tyr Val Ala Val Cys Arg		
	115	120 125
Pro Leu His Tyr Met Thr Val Met Asn Pro Arg Leu Cys Trp Gly Leu		
	130	135 140
Ala Ala Ile Ser Trp Leu Gly Gly Leu Gly Asn Ser Val Ile Gln Ser		
145	150	155 160
Thr Phe Thr Leu Gln Leu Pro Phe Cys Gly His Arg Lys Val Asp Asn		
	165	170 175
Phe Leu Cys Glu Val Pro Ala Met Ile Lys Leu Ala Cys Gly Asp Thr		
	180	185 190
Ser Leu Asn Glu Ala Val Leu Asn Gly Val Cys Thr Phe Phe Thr Val		
	195	200 205
Val Pro Val Ser Val Ile Leu Val Ser Tyr Cys Phe Ile Ala Gln Ala		
	210	215 220
Val Met Lys Ile Arg Ser Val Glu Gly Arg Arg Lys Ala Phe Asn Thr		
225	230	235 240
Cys Val Ser His Leu Val Val Val Phe Leu Phe Tyr Gly Ser Ala Ile		
	245	250 255
Tyr Gly Tyr Leu Leu Pro Ala Lys Ser Ser Asn Gln Ser Gln Gly Lys		
	260	265 270
Phe Ile Ser Leu Phe Tyr Ser Val Val Thr Pro Met Val Asn Pro Leu		
	275	280 285
Ile Tyr Thr Leu Arg Asn Lys Glu Val Lys Gly Ala Leu Gly Arg Leu		
	290	295 300
Leu Gly Lys Gly Arg Gly Ala Ser		
305	310	

<210> 50
 <211> 357
 <212> PRT
 <213> Homo sapiens

<400> 50

Met	Asn	Trp	Val	Asn	Lys	Ser	Val	Pro	Gln	Glu	Phe	Ile	Leu	Leu	Val	1	5	10	15
Phe	Ser	Asp	Gln	Pro	Trp	Leu	Glu	Ile	Pro	Pro	Phe	Val	Met	Phe	Leu	20	25	30	
Phe	Ser	Tyr	Ile	Leu	Thr	Ile	Phe	Gly	Asn	Leu	Thr	Ile	Ile	Leu	Val	35	40	45	
Ser	His	Val	Asp	Phe	Lys	Leu	His	Thr	Pro	Met	Tyr	Phe	Phe	Leu	Ser	50	55	60	
Asn	Leu	Ser	Leu	Leu	Asp	Leu	Cys	Tyr	Thr	Thr	Ser	Thr	Val	Pro	Gln	65	70	75	80
Met	Leu	Val	Asn	Ile	Cys	Asn	Thr	Arg	Lys	Val	Ile	Ser	Tyr	Gly	Gly	85	90	95	
Cys	Val	Ala	Gln	Leu	Phe	Ile	Phe	Leu	Ala	Leu	Gly	Ser	Thr	Glu	Cys	100	105	110	
Leu	Leu	Leu	Ala	Val	Met	Cys	Phe	Asp	Arg	Phe	Val	Ala	Ile	Cys	Arg	115	120	125	
Pro	Leu	His	Tyr	Ser	Ile	Ile	Met	His	Gln	Arg	Leu	Cys	Phe	Gln	Leu	130	135	140	
Ala	Ala	Ala	Ser	Trp	Ile	Ser	Gly	Phe	Ser	Asn	Ser	Val	Leu	Gln	Ser	145	150	155	160
Thr	Trp	Thr	Leu	Lys	Met	Pro	Leu	Cys	Gly	His	Lys	Glu	Val	Asp	His	165	170	175	
Phe	Phe	Cys	Glu	Val	Pro	Ala	Leu	Leu	Lys	Leu	Ser	Cys	Val	Asp	Thr	180	185	190	
Thr	Ala	Asn	Glu	Ala	Glu	Leu	Phe	Phe	Ile	Ser	Val	Leu	Phe	Leu	Leu	195	200	205	
Ile	Pro	Val	Thr	Leu	Ile	Leu	Ile	Ser	Tyr	Ala	Phe	Ile	Val	Gln	Ala	210	215	220	
Val	Leu	Arg	Ile	Gln	Ser	Ala	Glu	Gly	Arg	Arg	Lys	Ala	Phe	Gly	Thr	225	230	235	240
Cys	Gly	Ser	His	Leu	Ile	Val	Val	Ser	Leu	Phe	Tyr	Gly	Thr	Ala	Ile	245	250	255	
Ser	Met	Tyr	Leu	Gln	Pro	Pro	Ser	Pro	Ser	Ser	Lys	Asp	Arg	Gly	Lys	260	265	270	
Met	Val	Ser	Leu	Phe	Cys	Gly	Ile	Ile	Ala	Pro	Met	Leu	Asn	Pro	Leu	275	280	285	
Ile	Tyr	Thr	Leu	Arg	Asn	Lys	Glu	Val	Lys	Glu	Ala	Phe	Lys	Arg	Leu	290	295	300	

Val Ala Lys Ser Leu Leu Asn Gln Glu Ile Arg Asn Met Gln Met Ile
 305 310 315 320

Ser Phe Ala Lys Asp Thr Val Leu Thr Tyr Leu Thr Asn Phe Ser Ala
 325 330 335

Ser Cys Pro Ile Phe Val Ile Thr Ile Glu Asn Tyr Cys Asn Leu Pro
 340 345 350

Gln Arg Lys Phe Pro
 355

<210> 51

<211> 317

<212> PRT

<213> Mus musculus

<400> 51

Met Ala Ile Asn Lys Ser Ser Gly Gly Asp Phe Ile Leu Val Gly Phe
 1 5 10 15

Ser Asp Gln Pro Gln Leu Glu Lys Ile Leu Phe Val Leu Val Leu Ile
 20 25 30

Ser Tyr Leu Leu Thr Leu Val Gly Asn Thr Ala Ile Ile Leu Val Ser
 35 40 45

Cys Leu Asp Ser Ala Leu Gln Thr Pro Met Tyr Tyr Phe Leu Thr Asn
 50 55 60

Leu Ser Phe Val Asp Ile Cys Phe Ser Thr Ser Ile Val Pro Gln Leu
 65 70 75 80

Leu Trp Asn Leu His Gly Pro Ala Lys Thr Ile Thr Ala Thr Gly Cys
 85 90 95

Ala Ile Gln Leu Tyr Val Ser Leu Ala Leu Gly Ser Thr Glu Cys Val
 100 105 110

Leu Leu Ala Val Met Ala Phe Asp Arg Tyr Ala Ala Val Cys Arg Pro
 115 120 125

Leu His Tyr Ala Thr Val Met His Pro Arg Leu Cys Gln Ser Leu Ala
 130 135 140

Gly Val Ala Trp Leu Ser Gly Val Gly Asn Thr Leu Ile Gln Gly Thr
 145 150 155 160

Ile Thr Leu Arg Leu Pro Arg Cys Gly Asn His Lys Ile Tyr His Phe
 165 170 175

Ile Cys Glu Val Pro Ala Met Ile Lys Leu Ala Cys Val Asp Ile His
 180 185 190

Ala Asn Glu Val Gln Leu Phe Met Ala Ser Leu Val Leu Leu Leu Leu
 195 200 205

Pro Leu Thr Leu Ile Leu Val Ser Tyr Gly Tyr Ile Ala Gln Ala Leu
 210 215 220
 Met Arg Leu Arg Ser Ala Leu Thr Trp Gly Lys Ala Leu Gly Thr Cys
 225 230 235 240
 Gly Ser His Leu Ile Val Val Val Leu Phe Tyr Gly Thr Ser Thr Ala
 245 250 255
 Val Tyr Ile His Pro Asn Ser Ser Tyr Ala Gln Ser Gln Gly Lys Phe
 260 265 270
 Ile Thr Leu Leu Tyr Thr Val Val Ile Pro Thr Leu Asn Pro Leu Ile
 275 280 285
 Tyr Thr Leu Arg Asn Lys Asp Val Lys Gly Ala Leu Lys Arg Leu Val
 290 295 300
 Arg Lys Asp Ser Ser Thr Gly Lys Lys Ile Leu Ser Arg
 305 310 315

<210> 52
 <211> 357
 <212> PRT
 <213> Mus musculus

<400> 52
 Met Asn Trp Val Asn Lys Ser Val Pro Gln Glu Phe Ile Leu Leu Val
 1 5 10 15
 Phe Ser Asp Gln Pro Trp Leu Glu Ile Pro Pro Phe Val Met Phe Leu
 20 25 30
 Phe Ser Tyr Ile Leu Thr Ile Phe Gly Asn Leu Thr Ile Ile Leu Val
 35 40 45
 Ser His Val Asp Phe Lys Leu His Thr Pro Met Tyr Phe Phe Leu Ser
 50 55 60
 Asn Leu Ser Leu Leu Asp Leu Cys Tyr Thr Thr Ser Thr Val Pro Gln
 65 70 75 80
 Met Leu Val Asn Ile Cys Asn Thr Arg Lys Val Ile Ser Tyr Gly Gly
 85 90 95
 Cys Val Ala Gln Leu Phe Ile Phe Leu Ala Leu Gly Ser Thr Glu Cys
 100 105 110
 Leu Leu Leu Ala Val Met Cys Phe Asp Arg Phe Val Ala Ile Cys Arg
 115 120 125
 Pro Leu His Tyr Ser Ile Ile Met His Gln Arg Leu Cys Phe Gln Leu
 130 135 140
 Ala Ala Ala Ser Trp Ile Ser Gly Phe Ser Asn Ser Val Leu Gln Ser

145 150 155 160
 Thr Trp Thr Leu Lys Met Pro Leu Cys Gly His Lys Glu Val Asp His
 165 170 175
 Phe Phe Cys Glu Val Pro Ala Leu Leu Lys Leu Ser Cys Val Asp Thr
 180 185 190
 Thr Ala Asn Glu Ala Glu Leu Phe Phe Ile Ser Val Leu Phe Leu Leu
 195 200 205
 Ile Pro Val Thr Leu Ile Leu Ile Ser Tyr Ala Phe Ile Val Gln Ala
 210 215 220
 Val Leu Arg Ile Gln Ser Ala Glu Gly Gln Arg Lys Ala Phe Gly Thr
 225 230 235 240
 Cys Gly Ser His Leu Ile Val Val Ser Leu Phe Tyr Gly Thr Ala Ile
 245 250 255
 Ser Met Tyr Leu Gln Pro Pro Ser Pro Ser Ser Lys Asp Arg Gly Lys
 260 265 270
 Met Val Ser Leu Phe Cys Gly Ile Ile Ala Pro Met Leu Asn Pro Leu
 275 280 285
 Ile Tyr Thr Leu Arg Asn Lys Glu Val Lys Glu Ala Phe Lys Arg Leu
 290 295 300
 Val Ala Lys Ser Leu Leu Asn Gln Glu Ile Arg Asn Met Gln Met Ile
 305 310 315 320
 Ser Phe Ala Lys Asp Thr Val Leu Thr Tyr Leu Thr Asn Phe Ser Ala
 325 330 335
 Ser Cys Pro Ile Phe Val Ile Thr Ile Glu Asn Tyr Cys Asn Leu Pro
 340 345 350
 Gln Arg Lys Phe Pro
 355

<210> 53

<211> 311

<212> PRT

<213> Mus musculus

<400> 53

Met Glu Glu Tyr Asn Thr Ser Ser Thr Asp Phe Thr Phe Met Gly Leu
 1 5 10 15

Phe Asn Arg Lys Glu Thr Ser Gly Leu Ile Phe Ala Ile Ile Ser Ile
 20 25 30

Ile Phe Phe Thr Ala Leu Met Ala Asn Gly Val Met Ile Phe Leu Ile
 35 40 45

Gln	Thr	Asp	Leu	Arg	Leu	His	Thr	Pro	Met	Tyr	Phe	Leu	Leu	Ser	His	
	50					55					60					
Leu	Ser	Leu	Ile	Asp	Met	Met	Tyr	Ile	Ser	Thr	Ile	Val	Pro	Lys	Met	
	65				70					75					80	
Leu	Val	Asn	Tyr	Leu	Leu	Asp	Gln	Arg	Thr	Ile	Ser	Phe	Val	Gly	Cys	
				85					90					95		
Thr	Ala	Gln	His	Phe	Leu	Tyr	Leu	Thr	Leu	Val	Gly	Ala	Glu	Phe	Phe	
			100					105					110			
Leu	Leu	Gly	Leu	Met	Ala	Tyr	Asp	Arg	Tyr	Val	Ala	Ile	Cys	Asn	Pro	
		115					120					125				
Leu	Arg	Tyr	Pro	Val	Leu	Met	Ser	Arg	Arg	Val	Cys	Trp	Met	Ile	Ile	
	130					135					140					
Ala	Gly	Ser	Trp	Phe	Gly	Gly	Ser	Leu	Asp	Gly	Phe	Leu	Leu	Thr	Pro	
145					150					155					160	
Ile	Thr	Met	Ser	Phe	Pro	Phe	Cys	Asn	Ser	Arg	Glu	Ile	Asn	His	Phe	
				165					170					175		
Phe	Cys	Glu	Ala	Pro	Ala	Val	Leu	Lys	Leu	Ala	Cys	Ala	Asp	Thr	Ala	
			180					185					190			
Leu	Tyr	Glu	Thr	Val	Met	Tyr	Val	Cys	Cys	Val	Leu	Met	Leu	Leu	Ile	
	195						200					205				
Pro	Phe	Ser	Val	Val	Leu	Ala	Ser	Tyr	Ala	Arg	Ile	Leu	Thr	Thr	Val	
	210					215					220					
Gln	Cys	Met	Ser	Ser	Val	Glu	Gly	Arg	Lys	Lys	Ala	Phe	Ala	Thr	Cys	
225					230					235					240	
Ser	Ser	His	Met	Thr	Val	Val	Ser	Leu	Phe	Tyr	Gly	Ala	Ala	Met	Tyr	
				245					250					255		
Thr	Tyr	Met	Leu	Pro	His	Ser	Tyr	His	Lys	Pro	Ala	Gln	Asp	Lys	Val	
			260					265					270			
Leu	Ser	Val	Phe	Tyr	Thr	Ile	Leu	Thr	Pro	Met	Leu	Asn	Pro	Leu	Ile	
		275					280					285				
Tyr	Ser	Leu	Arg	Asn	Lys	Asp	Val	Thr	Gly	Ala	Leu	Lys	Arg	Ala	Leu	
	290					295					300					
Gly	Arg	Phe	Lys	Gly	Pro	Gln										
305					310											

<210> 54
 <211> 223
 <212> PRT
 <213> Mus musculus

<400> 54

Ser His Leu Ser Phe Ile Asp Met Met Tyr Ile Ser Thr Ile Val Pro
1 5 10 15

Lys Met Leu Val Asp Tyr Leu Leu Gly Gln Arg Thr Ile Ser Phe Val
20 25 30

Gly Cys Thr Ala Gln His Phe Leu Tyr Leu Thr Leu Val Gly Ala Glu
35 40 45

Phe Phe Leu Leu Gly Leu Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys
50 55 60

Asn Pro Leu Arg Tyr Pro Val Leu Met Ser Arg Arg Ile Cys Trp Ile
65 70 75 80

Ile Ile Ala Gly Ser Trp Phe Gly Gly Ser Leu Asp Gly Phe Leu Leu
85 90 95

Thr Pro Ile Thr Met Ser Phe Pro Phe Cys Arg Ser Arg Glu Ile Asn
100 105 110

His Phe Phe Cys Glu Ala Pro Ala Val Leu Lys Leu Ala Cys Ala Asp
115 120 125

Thr Ala Leu Tyr Glu Thr Val Met Tyr Val Cys Cys Val Leu Met Leu
130 135 140

Leu Ile Pro Phe Ser Val Val Ile Ser Ser Tyr Ala Arg Ile Leu Ala
145 150 155 160

Thr Val Tyr His Met Ser Ser Val Glu Gly Arg Lys Lys Ala Phe Ala
165 170 175

Thr Cys Ser Ser His Met Thr Val Val Thr Leu Phe Tyr Gly Ala Ala
180 185 190

Ile Tyr Thr Tyr Met Val Pro His Ser Tyr His Ser Pro Ser Gln Asp
195 200 205

Lys Ile Phe Ser Val Phe Tyr Thr Ile Leu Thr Pro Met Leu Asn
210 215 220

<210> 55

<211> 216

<212> PRT

<213> Homo sapiens

<400> 55

Leu Ile Asp Met Met Tyr Ile Ser Thr Ile Val Pro Lys Met Leu Val
1 5 10 15

Asn Tyr Leu Leu Asp Gln Arg Thr Ile Ser Phe Val Gly Cys Thr Ala
20 25 30

Gln His Phe Leu Tyr Leu Thr Leu Val Gly Ala Glu Phe Phe Leu Leu

35	40	45
Gly Leu Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Asn Pro Leu Arg		
50	55	60
Tyr Pro Val Leu Met Ser Arg Arg Val Cys Trp Met Ile Ile Ala Gly		
65	70	75 80
Ser Trp Phe Gly Gly Ser Leu Asp Gly Phe Leu Leu Thr Pro Ile Thr		
	85	90 95
Met Ser Phe Pro Phe Cys Asn Ser Arg Glu Ile Asn His Phe Phe Cys		
	100	105 110
Glu Ala Pro Ala Val Leu Lys Leu Ala Cys Ala Asp Thr Ala Leu Tyr		
	115	120 125
Glu Thr Val Met Tyr Val Cys Cys Val Leu Met Leu Leu Ile Pro Phe		
	130	135 140
Ser Val Val Leu Ala Ser Tyr Ala Arg Ile Leu Thr Thr Val Gln Cys		
	145	150 155 160
Met Ser Ser Val Glu Gly Arg Lys Lys Ala Phe Ala Thr Cys Ser Ser		
	165	170 175
His Met Thr Val Val Ser Leu Phe Tyr Gly Ala Ala Met Tyr Thr Tyr		
	180	185 190
Met Leu Pro His Ser Tyr His Lys Pro Ala Gln Asp Lys Val Leu Ser		
	195	200 205
Val Phe Tyr Thr Ile Leu Thr Pro		
	210	215

<210> 56
 <211> 316
 <212> PRT
 <213> Mus musculus

<400> 56
 Met Glu Pro Trp Asn Ser Thr Leu Gly Thr Asp Phe Asn Leu Val Gly
 1 5 10 15
 Ile Leu Asp Asp Ser Gly Ser Pro Glu Leu Leu Cys Ala Thr Phe Thr
 20 25 30
 Ala Leu Tyr Met Leu Ala Leu Ile Ser Asn Gly Leu Leu Ile Leu Val
 35 40 45
 Ile Thr Met Asp Ala Arg Leu His Val Pro Met Tyr Phe Leu Leu Gly
 50 55 60
 Gln Leu Ser Leu Met Asp Leu Leu Phe Thr Ser Val Val Thr Pro Lys
 65 70 75 80

Ala Val Ile Asp Phe Leu Leu Arg Asp Asn Thr Ile Ser Phe Glu Gly
 85 90 95
 Cys Ser Leu Gln Met Phe Leu Ala Leu Thr Leu Gly Gly Ala Glu Asp
 100 105 110
 Leu Leu Leu Ala Phe Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys His
 115 120 125
 Pro Leu Asn Tyr Met Ile Phe Met Arg Pro Ser Ile Cys Trp Leu Met
 130 135 140
 Val Ala Thr Ser Trp Val Leu Ala Ser Leu Met Ala Leu Gly Tyr Thr
 145 150 155 160
 Thr Tyr Thr Met Gln Tyr Ser Tyr Cys Lys Ser Arg Lys Ile Arg His
 165 170 175
 Leu Leu Cys Glu Ile Pro Pro Leu Leu Lys Leu Ala Cys Ala Asp Thr
 180 185 190
 Ser Lys Tyr Glu Leu Met Val Tyr Val Met Gly Val Thr Phe Leu Ile
 195 200 205
 Pro Pro Leu Ala Ala Ile Leu Ala Ser Tyr Ser Leu Ile Leu Phe Thr
 210 215 220
 Val Leu His Met Pro Ser Asn Glu Gly Arg Lys Lys Ala Leu Val Thr
 225 230 235 240
 Cys Ser Ser His Leu Thr Val Val Gly Met Phe Tyr Gly Ala Ala Thr
 245 250 255
 Phe Met Tyr Val Leu Pro Asn Ser Phe His Ser Pro Arg Gln Asp Asn
 260 265 270
 Ile Ile Ser Val Phe Tyr Thr Ile Val Thr Pro Ala Leu Asn Pro Leu
 275 280 285
 Ile Tyr Ser Leu Arg Asn Lys Glu Val Thr Gly Ala Leu Ile Arg Val
 290 295 300
 Leu Gly Arg Tyr Ile Val Pro Ala His Pro Thr Leu
 305 310 315

<210> 57

<211> 319

<212> PRT

<213> Mus musculus

<400> 57

Met Glu Phe Arg Asn Ser Thr Met Gly Asn Gly Phe Ile Leu Val Gly
 1 5 10 15

Ile Leu Asp Asp Ser Gly Ala Pro Asp Leu Leu Cys Ala Thr Ile Thr
 20 25 30

Ala	Leu	Tyr	Met	Leu	Ala	Leu	Thr	Ser	Asn	Gly	Val	Leu	Leu	Leu	Val
	35						40					45			
Ile	Thr	Met	Asp	Ala	Arg	Leu	Arg	Val	Pro	Met	Tyr	Leu	Leu	Leu	Gly
	50					55					60				
Gln	Leu	Ser	Leu	Met	Asp	Leu	Leu	Leu	Thr	Ser	Val	Ile	Thr	Pro	Lys
	65				70					75					80
Ala	Val	Ile	Asp	Phe	Leu	Leu	Lys	Asp	Asn	Thr	Ile	Ser	Phe	Gly	Gly
				85					90					95	
Cys	Ala	Leu	Gln	Met	Phe	Leu	Glu	Leu	Val	Leu	Gly	Ser	Ala	Glu	Asp
			100					105					110		
Leu	Leu	Leu	Ala	Phe	Met	Ala	Tyr	Asp	Arg	Tyr	Val	Ala	Ile	Cys	His
		115					120						125		
Pro	Leu	Asn	Tyr	Met	Ile	Phe	Met	Arg	Pro	Ser	Val	Cys	Trp	Phe	Ile
	130					135						140			
Val	Gly	Thr	Ile	Trp	Ile	Leu	Ala	Ser	Val	Ile	Ala	Leu	Gly	Phe	Thr
	145				150					155					160
Ile	Tyr	Thr	Met	Asn	Tyr	Pro	Phe	Cys	Lys	Ser	Arg	Gln	Ile	Arg	His
			165						170					175	
Leu	Phe	Cys	Glu	Ile	Pro	Pro	Leu	Leu	Lys	Leu	Ala	Cys	Glu	Asp	Thr
		180						185					190		
Ser	Thr	Tyr	Glu	Leu	Met	Val	Tyr	Leu	Ala	Gly	Val	Ser	Val	Leu	Ile
		195					200						205		
Leu	Pro	Leu	Ala	Val	Ile	Leu	Ala	Ser	Tyr	Val	Arg	Ile	Leu	Phe	Thr
	210					215					220				
Val	Leu	His	Met	Pro	Ser	Asn	Glu	Gly	Arg	Lys	Lys	Ala	Leu	Val	Thr
	225				230					235					240
Cys	Ser	Ser	His	Leu	Ile	Val	Val	Gly	Met	Trp	Tyr	Gly	Gly	Ser	Ser
			245						250					255	
Leu	Met	Tyr	Val	Leu	Pro	Ser	Gln	Phe	His	Ser	Pro	Lys	Gln	Asp	Asn
		260						265					270		
Ile	Leu	Ser	Ile	Phe	Tyr	Thr	Ile	Val	Thr	Pro	Ala	Leu	Asn	Pro	Leu
	275						280						285		
Ile	Tyr	Ser	Leu	Arg	Asn	Lys	Glu	Val	Thr	Gly	Ala	Leu	Arg	Arg	Ile
	290					295					300				
Phe	Gly	Lys	Trp	Leu	Gly	Pro	Ala	His	Phe	Leu	Gly	Ser	Ser	Phe	
	305				310					315					

<210> 58

<211> 316
 <212> PRT
 <213> Homo sapiens

<400> 58

Met	Glu	Leu	Trp	Asn	Phe	Thr	Leu	Gly	Ser	Gly	Phe	Ile	Leu	Val	Gly
1				5					10					15	
Ile	Leu	Asn	Asp	Ser	Gly	Ser	Pro	Glu	Leu	Leu	Cys	Ala	Thr	Ile	Thr
			20					25					30		
Ile	Leu	Tyr	Leu	Leu	Ala	Leu	Ile	Ser	Asn	Gly	Leu	Leu	Leu	Leu	Ala
		35					40					45			
Ile	Thr	Met	Glu	Ala	Arg	Leu	His	Met	Pro	Met	Tyr	Leu	Leu	Leu	Gly
	50					55					60				
Gln	Leu	Ser	Leu	Met	Asp	Leu	Leu	Phe	Thr	Ser	Val	Val	Thr	Pro	Lys
65					70					75					80
Ala	Leu	Ala	Asp	Phe	Leu	Arg	Arg	Glu	Asn	Thr	Ile	Ser	Phe	Gly	Gly
				85					90					95	
Cys	Ala	Leu	Gln	Met	Phe	Leu	Ala	Leu	Thr	Met	Gly	Gly	Ala	Glu	Asp
			100					105					110		
Leu	Leu	Leu	Ala	Phe	Met	Ala	Tyr	Asp	Arg	Tyr	Val	Ala	Ile	Cys	His
		115					120					125			
Pro	Leu	Thr	Tyr	Met	Thr	Leu	Met	Ser	Ser	Arg	Ala	Cys	Trp	Leu	Met
	130					135						140			
Val	Ala	Thr	Ser	Trp	Ile	Leu	Ala	Ser	Leu	Ser	Ala	Leu	Ile	Tyr	Thr
145					150					155					160
Val	Tyr	Thr	Met	His	Tyr	Pro	Phe	Cys	Arg	Ala	Gln	Glu	Ile	Arg	His
				165					170					175	
Leu	Leu	Cys	Glu	Ile	Pro	His	Leu	Leu	Lys	Val	Ala	Cys	Ala	Asp	Thr
			180				185						190		
Ser	Arg	Tyr	Glu	Leu	Met	Val	Tyr	Val	Met	Gly	Val	Thr	Phe	Leu	Ile
	195						200					205			
Pro	Ser	Leu	Ala	Ala	Ile	Leu	Ala	Ser	Tyr	Thr	Gln	Ile	Leu	Leu	Thr
	210					215					220				
Val	Leu	His	Met	Pro	Ser	Asn	Glu	Gly	Arg	Lys	Lys	Ala	Leu	Val	Thr
225					230					235					240
Cys	Ser	Ser	His	Leu	Thr	Val	Val	Gly	Met	Phe	Tyr	Gly	Ala	Ala	Thr
				245					250					255	
Phe	Met	Tyr	Val	Leu	Pro	Ser	Ser	Phe	His	Ser	Thr	Arg	Gln	Asp	Asn
			260					265					270		
Ile	Ile	Ser	Val	Phe	Tyr	Thr	Ile	Val	Thr	Pro	Ala	Leu	Asn	Pro	Leu

275 280 285
 Ile Tyr Ser Leu Arg Asn Lys Glu Val Met Arg Ala Leu Arg Arg Val
 290 295 300
 Leu Gly Lys Tyr Met Leu Pro Ala His Ser Thr Leu
 305 310 315

 <210> 59
 <211> 315
 <212> PRT
 <213> Mus musculus

 <400> 59
 Met Glu Val Cys Asn Ser Thr Leu Arg Ser Gly Phe Ile Leu Met Gly
 1 5 10 15
 Ile Leu Asp Asp Asn Asp Phe Pro Glu Leu Leu Cys Ala Thr Ile Thr
 20 25 30
 Ala Leu Tyr Leu Leu Ala Leu Thr Ser Asn Gly Leu Leu Leu Val
 35 40 45
 Ile Thr Met Asp Thr Arg Leu His Val Pro Met Tyr Leu Leu Leu Trp
 50 55 60
 Gln Leu Ser Leu Met Asp Leu Leu Leu Thr Ser Val Ile Thr Pro Lys
 65 70 75 80
 Ala Ile Leu Asp Tyr Leu Leu Lys Asp Asn Thr Ile Ser Phe Gly Gly
 85 90 95
 Cys Ala Leu Gln Met Phe Leu Ala Leu Thr Leu Gly Thr Ala Glu Asp
 100 105 110
 Leu Leu Leu Ser Phe Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys His
 115 120 125
 Pro Leu Asn Tyr Thr Ile Leu Met Ser Gln Lys Val Cys Cys Leu Met
 130 135 140
 Ile Ala Thr Ser Trp Ser Leu Ala Ser Leu Ser Ala Leu Gly Tyr Ser
 145 150 155 160
 Met Tyr Thr Met Gln Tyr Pro Phe Cys Lys Ser Arg Gln Ile Arg His
 165 170 175
 Leu Phe Cys Glu Ile Pro Pro Leu Leu Lys Leu Ala Cys Ala Asp Thr
 180 185 190
 Ser Thr Tyr Glu Leu Met Val Tyr Leu Met Gly Val Thr Leu Leu Phe
 195 200 205
 Pro Ala Leu Ala Ala Ile Leu Ala Ser Tyr Ser Leu Ile Leu Phe Thr
 210 215 220

Val Leu His Met Pro Ser Asn Glu Gly Arg Arg Lys Ala Leu Val Thr
 225 230 235 240

Cys Ser Ser His Leu Thr Val Val Gly Met Trp Tyr Gly Gly Ala Ile
 245 250 255

Val Met Tyr Val Leu Pro Ser Ser Phe His Ser Pro Lys Gln Asp Asn
 260 265 270

Ile Ser Ser Val Phe Tyr Thr Ile Phe Thr Pro Ala Leu Asn Pro Leu
 275 280 285

Ile Tyr Ser Leu Arg Asn Lys Glu Val Thr Gly Ala Leu Arg Arg Val
 290 295 300

Leu Gly Lys Arg Leu Ser Val Gln Ser Thr Phe
 305 310 315

<210> 60

<211> 316

<212> PRT

<213> Mus musculus

<400> 60

Met Glu Pro Trp Asn Ser Thr Leu Glu Ser Gly Phe Ile Leu Val Gly
 1 5 10 15

Ile Leu Asp Gly Ser Gly Ser Pro Glu Leu Leu Cys Ala Thr Val Thr
 20 25 30

Thr Leu Tyr Met Leu Ala Leu Ile Ser Asn Gly Leu Leu Leu Leu Val
 35 40 45

Ile Thr Val Asp Ala Arg Leu His Val Pro Met Tyr Leu Leu Leu Arg
 50 55 60

Gln Leu Ser Leu Ile Asp Leu Leu Phe Thr Ser Val Val Thr Pro Asn
 65 70 75 80

Thr Val Val Asp Phe Leu Leu Arg Asp Asn Thr Ile Ser Phe Glu Gly
 85 90 95

Cys Ala Leu Gln Leu Phe Ser Ala Met Thr Leu Gly Gly Ala Glu Glu
 100 105 110

Leu Leu Leu Ala Phe Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys His
 115 120 125

Pro Leu Asn Tyr Met Ile Phe Met Ser Pro Lys Ala Cys Arg Leu Met
 130 135 140

Val Ala Ile Ser Trp Ile Leu Ala Ser Leu Ser Ala Leu Gly His Thr
 145 150 155 160

Val Tyr Thr Met His Phe Pro Phe Cys Met Ser Gln Glu Ile Arg His
 165 170 175

Leu Leu Cys Glu Val Pro Pro Leu Leu Lys Leu Ala Cys Ala Asp Thr
 180 185 190
 Ser Gln Tyr Glu Leu Met Val Tyr Val Thr Gly Val Ile Phe Leu Leu
 195 200 205
 Leu Pro Leu Ser Ala Ile Ile Thr Ser Tyr Ser Leu Ile Leu Phe Thr
 210 215 220
 Val Leu His Met Pro Ser Asn Glu Gly Arg Lys Lys Ala Leu Val Thr
 225 230 235 240
 Cys Ser Ser His Leu Thr Val Val Gly Met Phe Tyr Gly Gly Ala Thr
 245 250 255
 Phe Met Tyr Val Leu Pro Ser Ser Phe His Ser Pro Lys Gln Asp Asn
 260 265 270
 Ile Ile Ser Val Phe Tyr Thr Ile Val Thr Pro Ala Leu Asn Pro Leu
 275 280 285
 Ile Tyr Ser Leu Arg Asn Lys Glu Val Ile Gly Ala Val Arg Arg Val
 290 295 300
 Leu Gly Arg His Ile Leu Pro Ala His Ala Thr Val
 305 310 315

<210> 61
 <211> 217
 <212> PRT
 <213> Homo sapiens

<400> 61
 Ile Ile Asp Ile Ser Tyr Ala Ser Asn Lys Val Pro Lys Met Leu Thr
 1 5 10 15
 Asn Leu Gly Leu Asn Lys Arg Lys Thr Ile Ser Phe Val Pro Cys Thr
 20 25 30
 Met Gln Thr Phe Leu Tyr Met Ala Phe Ala His Thr Glu Cys Leu Ile
 35 40 45
 Leu Val Met Met Ser Tyr Asp Arg Tyr Met Ala Ile Cys His Pro Leu
 50 55 60
 Gln Tyr Ser Val Ile Met Arg Trp Gly Val Cys Thr Val Leu Ala Val
 65 70 75 80
 Thr Ser Trp Ala Cys Gly Ser Leu Leu Ala Leu Val His Val Val Leu
 85 90 95
 Ile Leu Arg Leu Pro Phe Cys Gly Pro His Glu Ile Asn His Phe Phe
 100 105 110
 Cys Glu Ile Leu Ser Val Leu Lys Leu Ala Cys Ala Asp Thr Trp Leu

115	120	125
Asn Gln Val Val Ile Phe Ala Ala Ser Val Phe Ile Leu Val Gly Pro		
130	135	140
Leu Cys Leu Val Leu Val Ser Tyr Ser Arg Ile Leu Ala Ala Ile Leu		
145	150	155 160
Arg Ile Gln Ser Gly Glu Gly Arg Arg Lys Ala Phe Ser Thr Cys Ser		
	165	170 175
Ser His Leu Cys Met Val Gly Leu Phe Phe Gly Ser Ala Ile Val Met		
	180	185 190
Tyr Met Ala Pro Lys Ser Arg His Pro Glu Glu Gln Gln Lys Val Leu		
	195	200 205
Ser Leu Phe Tyr Ser Leu Phe Asn Pro		
210	215	

<210> 62

<211> 310

<212> PRT

<213> Homo sapiens

<400> 62

Met Gly Asp Asn Ile Thr Ser Ile Thr Glu Phe Leu Leu Leu Gly Phe		
1	5	10 15
Pro Val Gly Pro Arg Ile Gln Met Leu Leu Phe Gly Leu Phe Ser Leu		
	20	25 30
Phe Tyr Val Phe Thr Leu Leu Gly Asn Gly Thr Ile Leu Gly Leu Ile		
	35	40 45
Ser Leu Asp Ser Arg Leu His Ala Pro Met Tyr Phe Phe Leu Ser His		
	50	55 60
Leu Ala Val Val Asp Ile Ala Tyr Ala Cys Asn Thr Val Pro Arg Met		
	65	70 75 80
Leu Val Asn Leu Leu His Pro Ala Lys Pro Ile Ser Phe Ala Gly Arg		
	85	90 95
Met Met Gln Thr Phe Leu Phe Ser Thr Phe Ala Val Thr Glu Cys Leu		
	100	105 110
Leu Leu Val Val Met Ser Tyr Asp Leu Tyr Val Ala Ile Cys His Pro		
	115	120 125
Leu Arg Tyr Leu Ala Ile Met Thr Trp Arg Val Cys Ile Thr Leu Ala		
	130	135 140
Val Thr Ser Trp Thr Thr Gly Val Leu Leu Ser Leu Ile His Leu Val		
	145	150 155 160

Leu Leu Leu Pro Leu Pro Phe Cys Arg Pro Gln Lys Ile Tyr His Phe
 165 170 175
 Phe Cys Glu Ile Leu Ala Val Leu Lys Leu Ala Cys Ala Asp Thr His
 180 185 190
 Ile Asn Glu Asn Met Val Leu Ala Gly Ala Ile Ser Gly Leu Val Gly
 195 200 205
 Pro Leu Ser Thr Ile Val Val Ser Tyr Met Cys Ile Leu Cys Ala Ile
 210 215 220
 Leu Gln Ile Gln Ser Arg Glu Val Gln Arg Lys Ala Phe Cys Thr Cys
 225 230 235 240
 Phe Ser His Leu Cys Val Ile Gly Leu Phe Tyr Gly Thr Ala Ile Ile
 245 250 255
 Met Tyr Val Gly Pro Arg Tyr Gly Asn Pro Lys Glu Gln Lys Lys Tyr
 260 265 270
 Leu Leu Leu Phe His Ser Leu Phe Asn Pro Met Leu Asn Pro Leu Ile
 275 280 285
 Cys Ser Leu Arg Asn Ser Glu Val Lys Asn Thr Leu Lys Arg Val Leu
 290 295 300
 Gly Val Glu Arg Ala Leu
 305 310

<210> 63
 <211> 217
 <212> PRT
 <213> Homo sapiens

<400> 63
 Ile Ile Asp Ile Ser Tyr Ala Ser Asn Asn Val Pro Lys Met Leu Thr
 1 5 10 15
 Asn Leu Gly Leu Asn Lys Arg Lys Thr Ile Ser Phe Val Pro Cys Thr
 20 25 30
 Met Gln Thr Phe Leu Tyr Met Ala Phe Ala His Thr Glu Cys Leu Ile
 35 40 45
 Leu Val Met Met Ser Tyr Asp Arg Tyr Met Ala Ile Cys His Pro Leu
 50 55 60
 Gln Tyr Ser Val Ile Met Arg Trp Gly Val Cys Thr Val Leu Ala Val
 65 70 75 80
 Thr Ser Trp Ala Cys Gly Ser Leu Leu Ala Leu Val His Val Val Leu
 85 90 95
 Ile Leu Arg Leu Pro Phe Cys Gly Pro His Glu Ile Asn His Phe Phe
 100 105 110

Cys Glu Ile Leu Ser Val Leu Lys Leu Ala Cys Ala Asp Thr Trp Leu
 115 120 125
 Asn Gln Val Val Ile Phe Ala Ala Ser Val Phe Ile Leu Val Gly Pro
 130 135 140
 Leu Cys Leu Val Leu Val Ser Tyr Ser Arg Ile Leu Ala Ala Ile Leu
 145 150 155 160
 Gly Ile Gln Ser Gly Glu Gly Arg Arg Lys Ala Phe Ser Thr Cys Ser
 165 170 175
 Ser His Leu Cys Met Val Gly Leu Phe Phe Gly Ser Ala Ile Val Met
 180 185 190
 Tyr Met Ala Pro Lys Ser Arg His Pro Glu Glu Gln Gln Lys Val Leu
 195 200 205
 Ser Leu Phe Tyr Ser Leu Phe Asn Pro
 210 215

<210> 64
 <211> 217
 <212> PRT
 <213> Homo sapiens

<400> 64
 Ile Ile Asp Ile Ser Tyr Ala Ser Asn Lys Val Pro Lys Met Leu Thr
 1 5 10 15
 Asn Leu Gly Leu Asn Lys Arg Lys Thr Ile Ser Phe Val Pro Cys Thr
 20 25 30
 Met Gln Thr Phe Leu Tyr Met Ala Phe Ala His Thr Glu Cys Leu Ile
 35 40 45
 Leu Val Met Met Ser Tyr Asp Arg Tyr Met Ala Ile Cys His Pro Leu
 50 55 60
 Gln Tyr Ser Val Ile Met Arg Trp Gly Val Cys Thr Val Leu Ala Val
 65 70 75 80
 Thr Ser Trp Ala Cys Gly Ser Leu Leu Ala Leu Val His Val Val Leu
 85 90 95
 Ile Leu Arg Leu Pro Phe Cys Gly Pro His Glu Ile Asn His Phe Phe
 100 105 110
 Cys Glu Ile Leu Ser Val Leu Lys Leu Ala Cys Ala Asp Thr Trp Leu
 115 120 125
 Asn Gln Val Val Ile Phe Ala Ala Ser Val Phe Ile Leu Val Gly Pro
 130 135 140
 Leu Cys Leu Val Leu Val Ser Tyr Ser Arg Ile Leu Ala Ala Ile Leu

145		150		155		160
Gly Ile Gln Ser	Gly Glu Gly Arg Arg Lys Ala Phe Ser Thr Cys Ser					
	165		170		175	
Ser His Leu Cys Met Val Gly Leu Phe Phe Gly Ser Ala Ile Val Met						
	180		185		190	
Tyr Met Ala Pro Lys Ser Arg His Pro Glu Glu Gln Gln Lys Val Leu						
	195		200		205	
Ser Leu Phe Tyr Ser Leu Phe Asn Pro						
	210		215			

<210> 65
 <211> 310
 <212> PRT
 <213> Homo sapiens

<400> 65
Met Gly Asp Asn Ile Thr Ser Ile Arg Glu Phe Leu Leu Leu Gly Phe
1 5 10 15
Pro Val Gly Pro Arg Ile Gln Met Leu Leu Phe Gly Leu Phe Ser Leu
20 25 30
Phe Tyr Val Phe Thr Leu Leu Gly Asn Gly Thr Ile Leu Gly Leu Ile
35 40 45
Ser Leu Asp Ser Arg Leu His Ala Pro Met Tyr Phe Phe Leu Ser His
50 55 60
Leu Ala Val Val Asp Ile Ala Tyr Ala Cys Asn Thr Val Pro Arg Met
65 70 75 80
Leu Val Asn Leu Leu His Pro Ala Lys Pro Ile Ser Phe Ala Gly Arg
85 90 95
Met Met Gln Thr Phe Leu Phe Ser Thr Phe Ala Val Thr Glu Cys Leu
100 105 110
Leu Leu Val Val Met Ser Tyr Asp Leu Tyr Val Ala Ile Cys His Pro
115 120 125
Leu Arg Tyr Leu Ala Ile Met Thr Trp Arg Val Cys Ile Thr Leu Ala
130 135 140
Val Thr Ser Trp Thr Thr Gly Val Leu Leu Ser Leu Ile His Leu Val
145 150 155 160
Leu Leu Leu Pro Leu Pro Phe Cys Arg Pro Gln Lys Ile Tyr His Phe
165 170 175
Phe Cys Glu Ile Leu Ala Val Leu Lys Leu Ala Cys Ala Asp Thr His
180 185 190

Ile Asn Glu Asn Met Val Leu Ala Gly Ala Ile Ser Gly Leu Val Gly
 195 200 205
 Pro Leu Ser Thr Ile Val Val Ser Tyr Met Cys Ile Leu Cys Ala Ile
 210 215 220
 Leu Gln Ile Gln Ser Arg Glu Val Gln Arg Lys Ala Phe Arg Thr Cys
 225 230 235 240
 Phe Ser His Leu Cys Val Ile Gly Leu Val Tyr Gly Thr Ala Ile Ile
 245 250 255
 Met Tyr Val Gly Pro Arg Tyr Gly Asn Pro Lys Glu Gln Lys Lys Tyr
 260 265 270
 Leu Leu Leu Phe His Ser Leu Phe Asn Pro Met Leu Asn Pro Leu Ile
 275 280 285
 Cys Ser Leu Arg Asn Ser Glu Val Lys Asn Thr Leu Lys Arg Val Leu
 290 295 300
 Gly Val Glu Arg Ala Leu
 305 310

<210> 66
 <211> 484
 <212> PRT
 <213> Homo sapiens

<400> 66
 Met Ala Ala Ala Thr Gln Phe Leu Ser Gln Pro Ser Ser Leu Asn Pro
 1 5 10 15
 His Gln Leu Lys Asn Gln Thr Ser Gln Arg Ser Arg Ser Ile Pro Val
 20 25 30
 Leu Ser Leu Lys Ser Thr Leu Lys Pro Leu Lys Arg Leu Ser Val Lys
 35 40 45
 Ala Ala Val Val Ser Gln Asn Ser Ser Lys Thr Val Thr Lys Phe Asp
 50 55 60
 His Cys Phe Lys Lys Ser Ser Asp Gly Phe Leu Tyr Cys Glu Gly Thr
 65 70 75 80
 Lys Val Glu Asp Ile Met Glu Ser Val Glu Arg Arg Pro Phe Tyr Leu
 85 90 95
 Tyr Ser Lys Pro Gln Ile Thr Arg Asn Leu Glu Ala Tyr Lys Glu Ala
 100 105 110
 Leu Glu Gly Val Ser Ser Val Ile Gly Tyr Ala Ile Lys Ala Asn Asn
 115 120 125
 Asn Leu Lys Ile Leu Glu His Leu Arg Ser Leu Gly Cys Gly Ala Val
 130 135 140

Leu Val Ser Gly Asn Glu Leu Arg Leu Ala Leu Arg Ala Gly Phe Asp
 145 150 155 160
 Pro Thr Lys Cys Ile Phe Asn Gly Asn Gly Lys Ser Leu Glu Asp Leu
 165 170 175
 Val Leu Ala Ala Gln Glu Gly Val Phe Val Asn Val Asp Ser Glu Phe
 180 185 190
 Asp Leu Asn Asn Ile Val Glu Ala Ser Arg Ile Ser Gly Lys Gln Val
 195 200 205
 Asn Val Leu Leu Arg Ile Asn Pro Asp Val Asp Pro Gln Val His Pro
 210 215 220
 Tyr Val Ala Thr Gly Asn Lys Asn Ser Lys Phe Gly Ile Arg Asn Glu
 225 230 235 240
 Lys Leu Gln Trp Phe Leu Asp Gln Val Lys Ala His Pro Lys Glu Leu
 245 250 255
 Lys Leu Val Gly Ala His Cys His Leu Gly Ser Thr Ile Thr Lys Val
 260 265 270
 Asp Ile Phe Arg Asp Ala Ala Val Leu Met Ile Glu Tyr Ile Asp Glu
 275 280 285
 Ile Arg Arg Gln Gly Phe Glu Val Ser Tyr Leu Asn Ile Gly Gly Gly
 290 295 300
 Leu Gly Ile Asp Tyr Tyr His Ala Gly Ala Val Leu Pro Thr Pro Met
 305 310 315 320
 Asp Leu Ile Asn Thr Val Arg Glu Leu Val Leu Ser Arg Asp Leu Asn
 325 330 335
 Leu Ile Ile Glu Pro Gly Arg Ser Leu Ile Ala Asn Thr Cys Cys Phe
 340 345 350
 Val Asn His Val Thr Gly Val Lys Thr Asn Gly Thr Lys Asn Phe Ile
 355 360 365
 Val Ile Asp Gly Ser Met Ala Glu Leu Ile Arg Pro Ser Leu Tyr Asp
 370 375 380
 Ala Tyr Gln His Ile Glu Leu Val Ser Pro Pro Pro Ala Glu Ala Glu
 385 390 395 400
 Val Thr Lys Phe Asp Val Val Gly Pro Val Cys Glu Ser Ala Asp Phe
 405 410 415
 Leu Gly Lys Asp Arg Glu Leu Pro Thr Pro Pro Gln Gly Ala Gly Leu
 420 425 430
 Val Val His Asp Ala Gly Ala Tyr Cys Met Ser Met Ala Ser Thr Tyr
 435 440 445

Asn Leu Lys Met Arg Pro Pro Glu Tyr Trp Val Glu Glu Asp Gly Ser
 450 455 460

Ile Thr Lys Ile Arg His Ala Glu Thr Phe Asp Asp His Leu Arg Phe
 465 470 475 480

Phe Glu Gly Leu

<210> 67

<211> 254

<212> PRT

<213> Homo sapiens

<400> 67

Gly Asn Leu Leu Val Ile Leu Val Ile Leu Arg Thr Lys Lys Leu Arg
 1 5 10 15

Thr Pro Thr Asn Ile Phe Leu Leu Asn Leu Ala Val Ala Asp Leu Leu
 20 25 30

Phe Leu Leu Thr Leu Pro Pro Trp Ala Leu Tyr Tyr Leu Val Gly Gly
 35 40 45

Asp Trp Val Phe Gly Asp Ala Leu Cys Lys Leu Val Gly Ala Leu Phe
 50 55 60

Val Val Asn Gly Tyr Ala Ser Ile Leu Leu Leu Thr Ala Ile Ser Ile
 65 70 75 80

Asp Arg Tyr Leu Ala Ile Val His Pro Leu Arg Tyr Arg Arg Ile Arg
 85 90 95

Thr Pro Arg Arg Ala Lys Val Leu Ile Leu Leu Val Trp Val Leu Ala
 100 105 110

Leu Leu Leu Ser Leu Pro Pro Leu Leu Phe Ser Trp Leu Arg Thr Val
 115 120 125

Glu Glu Gly Asn Thr Thr Val Cys Leu Ile Asp Phe Pro Glu Glu Ser
 130 135 140

Val Lys Arg Ser Tyr Val Leu Leu Ser Thr Leu Val Gly Phe Val Leu
 145 150 155 160

Pro Leu Leu Val Ile Leu Val Cys Tyr Thr Arg Ile Leu Arg Thr Leu
 165 170 175

Arg Lys Arg Ala Arg Ser Gln Arg Ser Leu Lys Arg Arg Ser Ser Ser
 180 185 190

Glu Arg Lys Ala Ala Lys Met Leu Leu Val Val Val Val Val Phe Val
 195 200 205

Leu Cys Trp Leu Pro Tyr His Ile Val Leu Leu Leu Asp Ser Leu Cys

210	215	220
Leu Leu Ser Ile Trp Arg Val Leu Pro Thr Ala Leu Leu Ile Thr Leu		
225	230	235 240
Trp Leu Ala Tyr Val Asn Ser Cys Leu Asn Pro Ile Ile Tyr		
245	250	
<210> 68		
<211> 241		
<212> PRT		
<213> Homo sapiens		
<400> 68		
Lys Leu Arg Thr Pro Thr Asn Ile Phe Leu Leu Asn Leu Ala Val Ala		
1	5	10 15
Asp Leu Leu Phe Leu Leu Thr Leu Pro Pro Trp Ala Leu Tyr Tyr Leu		
20	25	30
Val Gly Gly Asp Trp Val Phe Gly Asp Ala Leu Cys Lys Leu Val Gly		
35	40	45
Ala Leu Phe Val Val Asn Gly Tyr Ala Ser Ile Leu Leu Leu Thr Ala		
50	55	60
Ile Ser Ile Asp Arg Tyr Leu Ala Ile Val His Pro Leu Arg Tyr Arg		
65	70	75 80
Arg Ile Arg Thr Pro Arg Arg Ala Lys Val Leu Ile Leu Leu Val Trp		
85	90	95
Val Leu Ala Leu Leu Leu Ser Leu Pro Pro Leu Leu Phe Ser Trp Leu		
100	105	110
Arg Thr Val Glu Glu Gly Asn Thr Thr Val Cys Leu Ile Asp Phe Pro		
115	120	125
Glu Glu Ser Val Lys Arg Ser Tyr Val Leu Leu Ser Thr Leu Val Gly		
130	135	140
Phe Val Leu Pro Leu Leu Val Ile Leu Val Cys Tyr Thr Arg Ile Leu		
145	150	155 160
Arg Thr Leu Arg Lys Arg Ala Arg Ser Gln Arg Ser Leu Lys Arg Arg		
165	170	175
Ser Ser Ser Glu Arg Lys Ala Ala Lys Met Leu Leu Val Val Val Val		
180	185	190
Val Phe Val Leu Cys Trp Leu Pro Tyr His Ile Val Leu Leu Leu Asp		
195	200	205
Ser Leu Cys Leu Leu Ser Ile Trp Arg Val Leu Pro Thr Ala Leu Leu		
210	215	220

Ile Thr Leu Trp Leu Ala Tyr Val Asn Ser Cys Leu Asn Pro Ile Ile
 225 230 235 240

Tyr

<210> 69
 <211> 253
 <212> PRT
 <213> Homo sapiens

<400> 69
 Asn Leu Leu Val Ile Leu Val Ile Leu Arg Thr Lys Lys Leu Arg Thr
 1 5 10 15

Pro Thr Asn Ile Phe Leu Leu Asn Leu Ala Val Ala Asp Leu Leu Phe
 20 25 30

Leu Leu Thr Leu Pro Pro Trp Ala Leu Tyr Tyr Leu Val Gly Gly Asp
 35 40 45

Trp Val Phe Gly Asp Ala Leu Cys Lys Leu Val Gly Ala Leu Phe Val
 50 55 60

Val Asn Gly Tyr Ala Ser Ile Leu Leu Leu Thr Ala Ile Ser Ile Asp
 65 70 75 80

Arg Tyr Leu Ala Ile Val His Pro Leu Arg Tyr Arg Arg Ile Arg Thr
 85 90 95

Pro Arg Arg Ala Lys Val Leu Ile Leu Leu Val Trp Val Leu Ala Leu
 100 105 110

Leu Leu Ser Leu Pro Pro Leu Leu Phe Ser Trp Leu Arg Thr Val Glu
 115 120 125

Glu Gly Asn Thr Thr Val Cys Leu Ile Asp Phe Pro Glu Glu Ser Val
 130 135 140

Lys Arg Ser Tyr Val Leu Leu Ser Thr Leu Val Gly Phe Val Leu Pro
 145 150 155 160

Leu Leu Val Ile Leu Val Cys Tyr Thr Arg Ile Leu Arg Thr Leu Arg
 165 170 175

Lys Arg Ala Arg Ser Gln Arg Ser Leu Lys Arg Arg Ser Ser Ser Glu
 180 185 190

Arg Lys Ala Ala Lys Met Leu Leu Val Val Val Val Val Phe Val Leu
 195 200 205

Cys Trp Leu Pro Tyr His Ile Val Leu Leu Leu Asp Ser Leu Cys Leu
 210 215 220

Leu Ser Ile Trp Arg Val Leu Pro Thr Ala Leu Leu Ile Thr Leu Trp
 225 230 235 240

Leu Ala Tyr Val Asn Ser Cys Leu Asn Pro Ile Ile Tyr
 245 250

<210> 70
 <211> 237
 <212> PRT
 <213> Homo sapiens

<400> 70
 Pro Thr Asn Ile Phe Leu Leu Asn Leu Ala Val Ala Asp Leu Leu Phe
 1 5 10 15

Leu Leu Thr Leu Pro Pro Trp Ala Leu Tyr Tyr Leu Val Gly Gly Asp
 20 25 30

Trp Val Phe Gly Asp Ala Leu Cys Lys Leu Val Gly Ala Leu Phe Val
 35 40 45

Val Asn Gly Tyr Ala Ser Ile Leu Leu Leu Thr Ala Ile Ser Ile Asp
 50 55 60

Arg Tyr Leu Ala Ile Val His Pro Leu Arg Tyr Arg Arg Ile Arg Thr
 65 70 75 80

Pro Arg Arg Ala Lys Val Leu Ile Leu Leu Val Trp Val Leu Ala Leu
 85 90 95

Leu Leu Ser Leu Pro Pro Leu Leu Phe Ser Trp Leu Arg Thr Val Glu
 100 105 110

Glu Gly Asn Thr Thr Val Cys Leu Ile Asp Phe Pro Glu Glu Ser Val
 115 120 125

Lys Arg Ser Tyr Val Leu Leu Ser Thr Leu Val Gly Phe Val Leu Pro
 130 135 140

Leu Leu Val Ile Leu Val Cys Tyr Thr Arg Ile Leu Arg Thr Leu Arg
 145 150 155 160

Lys Arg Ala Arg Ser Gln Arg Ser Leu Lys Arg Arg Ser Ser Ser Glu
 165 170 175

Arg Lys Ala Ala Lys Met Leu Leu Val Val Val Val Val Phe Val Leu
 180 185 190

Cys Trp Leu Pro Tyr His Ile Val Leu Leu Leu Asp Ser Leu Cys Leu
 195 200 205

Leu Ser Ile Trp Arg Val Leu Pro Thr Ala Leu Leu Ile Thr Leu Trp
 210 215 220

Leu Ala Tyr Val Asn Ser Cys Leu Asn Pro Ile Ile Tyr
 225 230 235

<210> 71
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR Primer
Sequence

<400> 71
ttttatggga caatctcctt ca 22

<210> 72
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR Primer
Sequence

<400> 72
tgtacttcaa acccaaggcc aaggat 26

<210> 73
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR Primer
Sequence

<400> 73
gaacaatgcg acagtcttat cc 22

<210> 74
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR Primer
Sequence

<400> 74
ctatdddggg gaataccacc at 22

<210> 75
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: PCR Primer
 Sequence

<400> 75
 tttctcgtct ggaacccaag ctcat 26

<210> 76
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: PCR Primer
 Sequence

<400> 76
 ggaaggagag atgagaaagg aa 22

<210> 77
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: PCR Primer
 Sequence

<400> 77
 acgcagtgtt gaggattaag tc 22

<210> 78
 <211> 26
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: PCR Primer
 Sequence

<400> 78
 acagaaagca ttcgggacct gcttct 26

<210> 79
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: PCR Primer
 Sequence

<400> 79

tgatggttcc ataaaagatg gt

22

<210> 80

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: PCR Primer
Sequence

<400> 80

ctattttggg gaataccacc at

22

<210> 81

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: PCR Primer
Sequence

<400> 81

tctcgtctgg aacccaagcc tcatat

26

<210> 82

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: PCR Primer
Sequence

<400> 82

ggaaggagag atgagaaagg aa

22

<210> 83

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: PCR Primer
Sequence

<400> 83

tttggctagt tccctaattcc at

22

<210> 84

<211> 26

<212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: PCR Primer
 Sequence

 <400> 84
 aattgcctct ctgtggcaac catagg 26

 <210> 85
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 <213> Artificial Sequence

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 <223> Description of Artificial Sequence: PCR Primer
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 <400> 85
 tgg tacttcg caaataaaat gg 22

 <210> 86
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 <213> Artificial Sequence

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 <223> Description of Artificial Sequence: PCR Primer
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 <400> 86
 tctggaggct gttctctttg ta 22

 <210> 87
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 <223> Description of Artificial Sequence: PCR Primer
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 <400> 87
 tcttctacct cctgaccctt gtggga 26

 <210> 88
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 <223> Description of Artificial Sequence: PCR Primer

Sequence

<400> 88
ggggatccag atatgagatg at 22

<210> 89
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR Primer
Sequence

<400> 89
tgagcaggac aaagctgtat ct 22

<210> 90
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Sequence

<400> 90
ccttactccc atgctcaatc cactca 26

<210> 91
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<223> Description of Artificial Sequence: PCR Primer
Sequence

<400> 91
cctgtgacat ccttggtcct aa 22

<210> 92
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<223> Description of Artificial Sequence: PCR Primer
Sequence

<400> 92
acctcccaac aaccttctgt ag 22

<210> 93
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Sequence

<400> 93
ccgtgacatc cttgttccta aggctg 26

<210> 94
<211> 22
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<220>
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Sequence

<400> 94
ccatgctcaa tccactcatt ta 22

<210> 95
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<220>
<223> Description of Artificial Sequence: PCR Primer
Sequence

<400> 95
catcctcacc atccataaga tg 22

<210> 96
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<220>
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Sequence

<400> 96
aaaaggcctt caccacctgc tcct 24

<210> 97
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: PCR Primer
Sequence

<400> 97
gaagaggctg accactgtaa tg 22

<210> 98
<211> 18
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<213> Artificial Sequence

<220>
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Sequence

<400> 98
gcccaagatg ctcttgga 18

<210> 99
<211> 30
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<220>
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Sequence

<400> 99
caggatcatgg gtgtgaataa gatctcagcc 30

<210> 100
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Sequence

<400> 100
ggaacatctg catccacac t 21

<210> 101
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Sequence

<400> 101
gatttcatcc tcatgggact ct 22

<210> 102
<211> 26
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Sequence

<400> 102
tcagacgatc caaacatcca gctcta 26

<210> 103
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Sequence

<400> 103
tcaggaaaac cacaagatg ac 22

<210> 104
<211> 22
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<220>
<223> Description of Artificial Sequence: PCR Primer
Sequence

<400> 104
ccctcatgta cctatgctgt gt 22

<210> 105
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<220>
<223> Description of Artificial Sequence: PCR Primer
Sequence

<400> 105
cctcatccct gtgacgatca tttaa 26

<210> 106

<211> 22
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<220>
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Sequence

<400> 106
acggtgagga ggatgagtaa at 22

<210> 107
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<220>
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Sequence

<400> 107
tggacaccct ttcatctgt ac 22

<210> 108
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Sequence

<400> 108
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<210> 109
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Sequence

<400> 109
gccacaaagg aaatgatctt ct 22

<210> 110
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Sequence

<400> 110
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<210> 111
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<220>
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Sequence

<400> 111
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<210> 112
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<212> DNA
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Sequence

<400> 112
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<210> 113
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<212> DNA
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Sequence

<400> 113
tgagcaggac aaagctgtat ct 22

<210> 114
<211> 26
<212> DNA
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<220>
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Sequence

<400> 114
ccttactccc atgctcaatc cactca 26

<210> 115
<211> 22
<212> DNA
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<220>
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Sequence

<400> 115
cctgtgacat ccttggtcct aa 22

<210> 116
<211> 22
<212> DNA
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<220>
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Sequence

<400> 116
attctcaaga acggaggaag at 22

<210> 117
<211> 26
<212> DNA
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<220>
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Sequence

<400> 117
tttacagcct tttcaaccg atcctg 26

<210> 118
<211> 22
<212> DNA
<213> Artificial Sequence

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Sequence

<400> 118
tctgcattcc taaggctgta ga 22

<210> 119
<211> 21
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<213> Artificial Sequence

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<223> Description of Artificial Sequence: PCR Primer
Sequence

<400> 119

aggaagatcc tttccctggt t

21

<210> 120

<211> 26

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<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: PCR Primer
Sequence

<400> 120

tacagccttt tcaaccgat cctgaa

26

<210> 121

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: PCR Primer
Sequence

<400> 121

ctctctttag agcccctttc ac

22

<210> 122

<211> 22

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: PCR Primer
Sequence

<400> 122

taccgatcat agcacatcat ca

22

<210> 123

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: PCR Primer
Sequence

<400> 123
tcagacactc tgtaatagca aacgcca 27

<210> 124
<211> 22
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<220>
<223> Description of Artificial Sequence: PCR Primer
Sequence

<400> 124
tgctccttgc atacttcaga ct 22

<210> 125
<211> 22
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<220>
<223> Description of Artificial Sequence: PCR Primer
Sequence

<400> 125
attctcaaga acggaggaag at 22

<210> 126
<211> 26
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<220>
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Sequence

<400> 126
tttacagcct tttcaaccgc atcctg 26

<210> 127
<211> 22
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<213> Artificial Sequence

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Sequence

<400> 127
tctgcattcc taaggctgta ga 22